Assessment & Outcomes Based Education Handbook

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MED@UP

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January 2018

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1. Introduction

As academics, it is important to keep abreast of current development and thinking in relation to teaching and learning. We need to be experts not only in our subject area, but also in the most appropriate ways to teach in this subject area, how to engage students, and how best to assess their learning. Universities need to ensure that they keep up to date with modern practices, that they embrace technology, as appropriate, and that they keep abreast of the requirements of modern professions that our university qualifications lead into. By continuing to review and develop our practice, we aim to ensure that the individual academic, the department, the faculty, and ultimately the university will be able to continue to develop and grow its' reputation as a modern university that is up to date, and succeeding in supporting its students to achieve.

Modern universities expect that their academics continually reflect and seek ways to improve how they teach, how they assess, and how they support students. These priorities will often inform Continuous Professional Development that universities will provide for their staff, and also specific qualifications in relation to Teaching in Higher Education that universities often provide for their staff, particularly in the UK. (In the UK, status of Fellow of the Higher Education Academy, which is conferred via a portfolio, or via completion of a Postgraduate Certificate in Teaching in Higher Education is a key metric that contributes to institutional standing in national league tables).

The aim of this handbook is to give a broad overview of current thinking in relation to teaching and learning in higher education, with a particular focus on its' impact on how we go about teaching and assessing students in third level education. This handbook is informed by multiple sources:

1. The Quality Assurance processes and guidance that are common to all UK universities
2. Handbooks similar to this one, produced by universities in relation to teaching, learning and assessment
3. Key texts and research in the area of teaching in higher education.

It is also to some extent informed by some of the modules delivered in the Capacity Building Programme at the University of Pristina between 2014 and 2017, particularly the module that focused on assessment. It can be used as a guide to help you as an academic to reflect on your practice.

In the first chapter of this handbook, there will be a focus on the relationship between learning outcomes, teaching, and assessment. It will also touch on the differences between undergraduate and postgraduate study. The second chapter will focus on assessment and feedback, with the third chapter providing a detailed discussion of common assessment methods used in universities.

However, this work will commence with a brief consideration of old or traditional perspectives of students and learning, compared to modern perspectives.

1.1 Traditional and Modern Perspectives on Teaching and Learning

In a discussion of changes to the curriculum in South Africa, Brodie (2002), highlights the distinctions that the South African Department of Education made between traditional and modern perspectives on teaching and learning. Where traditional modes focus on the role of the teacher as the key active participant in the classroom, modern perspectives acknowledge that the active role students must play in order to absorb knowledge, and develop skills (see table 1).

Table 1.Old and New Conceptions of teaching and learning

OLD	NEW
Passive Learners	Active learners
Rote Learning	Critical thinking, reasoning, reflection and action
Syllabus is content based and broken down into subjects	An integration of knowledge, learning relevant and connected to real-life situations
Textbook/worksheet bound and teacher-centred	Learner-centred, teacher is a facilitator, teacher constantly uses group work and teamwork
Teachers responsible for learning: motivation dependent on the personality of the teacher	Learners take responsibility for their learning; pupils motivated by constant feedback and affirmation of their worth
Content placed into rigid time-frames	Flexible time-frames allow learners to work at their own pace.

It is important to consider, when possible, how we as academics address aspects considered to characterise modern learners:

- Do we give them active opportunities to learn, to practice skills?
- Do students have opportunities to critically consider issues, to reflect on what they have learned, and evaluate the value of different perspectives/data?
- Do students have the opportunity to consider how theoretical issues play out in real world contexts? Can they connect abstract discussions around pedagogy to a classroom setting?
- Do we facilitate groupwork and give students opportunities to discuss and debate amongst themselves as a formal part of the learning process?
- Do we give students appropriate opportunities to take ownership of their own learning, and do we give appropriate feedback and support to maintain and increase motivation?
- Do we provide enough time within a course to ensure students can keep up with the material, rather than presuming that all students will learn and cover material at the same, quick, pace?

These types of question can be very helpful to come back to as you cover the material elsewhere in this handbook.

1.2Learning Outcomes

Modern Higher Education courses are driven by Learning Outcomes – statements which set out the expectations for the knowledge and skills that a holder of a specific graduate or postgraduate should have upon completion of a course. Learning Outcomes can directly frame the competences that students should have as a result of their studies (see CEDEFOP, 2009 for an indepth discussion on this topic, which includes a more detailed discussion of the different meanings of competences across different contexts and languages.)

Learning Outcomes play a key role in Quality Assurance processes. Adam (2004, see also CEDEFOP, 2009) notes that in the context of courses offered within the European Higher Education Area (of which the Bologna process is a part); Learning Outcomes are more or less ubiquitous.The CEDEFOP (2009, p. 9) notes that “There is a growing and dynamic role for learning outcomes in education and training reform, always in conjunction with other factors.” These learning outcomes are often driven by national or international standards, either in Higher Education in general, or in specific subject areas.

For example, Learning Outcomes for Teacher Training Courses across England are driven by government standards set in order to qualify students for Qualified Teacher Status. Learning Outcomes for programmes and courses allow an easy comparison to be made between institutions, and to ensure comparability of outcomes – e.g. that students emerging from 2 institutions with Qualified Teacher Status will have met similar learning outcomes, and have comparable knowledge and skills. One would expect similar conditions to apply to other highly skilled qualification in the area of medicine, the law, engineering, etc.

Adam (2004) notes that Learning Outcomes apply at 3 distinct levels

1. Individual institutional level, for individual units/modules, and for degrees/qualifications

2. At the national level, where qualifications are mapped onto national qualification frameworks and quality assurance paperwork
3. Internationally, so that the extent to which a qualification in one country meets the professional requirements for that particular qualification/profession in the other country (ECTS points are underpinned by this).

A document on the use of learning outcomes (European Qualifications Network, 2011, p. 4) highlights the benefits of learning outcomes from a broad quality perspective, as they allow:

• Better matching of qualifications with labour market expectations.

• Greater openness of education and training systems to recognise learning achievement independent of where it was acquired.

• Enhanced flexibility and accountability of education and training systems which are expected to deliver the defined outcomes whilst enabling greater autonomy in defining the routes to those outcomes.

There are a number of important benefits attached to the use of learning outcomes, some of which are set out in Table 2, most of which are based around the fact that they communicate a clear set of expectations which both staff and students should regularly return to and reflect on.

Table 2. The benefits of Learning Outcomes for Academics

Benefits	**Detail**
Effective Course Design	By keeping learning outcomes front and centre, academics can develop courses in which all aspects of the course, including learning activities and assessments, support what they want students to learn
Effective Assessment of Learning	Clear expectations make it easier to evaluate student progress and ensure that assessments are targeting the appropriate level of knowledge or skill
Better Time Management	Well-defined outcomes simplify difficult decisions about what content to include and what to omit when preparing lessons and assessments
Improved Communication	Academics can use learning outcomes to have explicit and constructive dialogues with students about the course and their learning, and with colleagues about the expectations of courses
Improved Teaching Experience	Academics who use learning outcomes report less anxiety, more confidence interacting with students and use more diverse teaching and assessment approaches.

Jenkins & Unwin (2001, cited in Harden, 2002) highlight the ways in which learning outcomes help both students. They:

- Support the effective learning of students, as they provide a basis for them to understand the curriculum they will be covering
- The value of a particular course is effectively communicated, as the learning outcomes highlight the skills and knowledge that students will be able to develop as a result of their studies

Producing Learning Outcomes is not easy – how can one reduce a course or programme to a relatively small number of statements, that are accessible, whilst respecting the complexity of that course? Bloom's taxonomy as it relates to the

cognitive domain(see table 3) is often used to help to distinguish between the key words expected within a learning outcome, depending on the level being operated at within higher education. Evaluation and synthesis, considered to be key critical thinking skills, are commonly expected in the Learning Outcome for programmes of postgraduate studies. The key words on the right hand side of the table provide useful synonyms to incorporate into learning outcomes. While knowledge is always required within a course, at higher levels of education, one expects students to be able to analyse, synthesise, and evaluate complex scenarios and data.

Table 3. Definitions and synonyms for the cognitive levels of Bloom's taxonomy

Bloom's Taxonomy	Definition	Selective Key words
Evaluation (highest)	*Ability to make a judgement of the worth of something*	assess, criticise, evaluate, defend, debate, conclude, justify, contrast, appraise, discriminate, determine
Synthesis	*Ability to combine separate elements into a coherent whole*	plan, formulate, redefine, initiate, conceptualise, assemble, prepare, construct, elaborate, organise, design, develop, invent, create, develop
Analysis	*Ability to break a problem down into its constituent parts and establish the relationships between each one*	analyse, compare, criticise, categorise, examine, appraise, debate, contrast, question, distinguish
Application	*Ability to apply knowledge in novel situations*	administer, advise, carry out, construct, hypothesise, improve, use, teach
Comprehension or Manipulation	*Ability to rephrase knowledge*	compare, contrast, abstract, develop, understand
Knowledge (lowest)	*Ability to recall that which is known*	list, describe, outline, identify, display, state, record, recognise,

		draw on, reveal, observe, recount, recognise, respond to, judge, indicate, explain, account, outline,

When producing learning outcomes, it is important to take into account the need to specify both an observable action, and the object of that action. It may be useful to begin each learning outcome statement with “Students will be able to...,” followed by an appropriate verb relating to the object/topic. In addition to this, learning outcomes may link back to external criteria or acceptable performance level.

Good learning outcomes should:

- specify the level, criteria, or standards for the knowledge, skills, abilities, or competencies that students are expected to be able to demonstrate.
- include conditions under which students should be able to demonstrate their knowledge, skills, abilities, or competencies.
- contain active verbs.
- be expressed in ways that make them capable of being measured by more than one assessment tool, instrument, or metric. (IACBE, online)

Terms that you might wish to avoid due to vagueness include:

- Appreciate
- Comprehend
- Be aware of
- Know
- Be familiar with

As will be seen, the use of this type of language can result in lowering standards expected for work in order to pass a course, as they do not provide a high threshold

in terms of knowledge and understanding for this unit. The IACBE have created a helpful checklist to use when writing learning outcomes (see appendix 1).

Learning Outcomes are not without their problems sadly. Adam (2004) highlights that their prescriptive nature might narrow teaching and curriculum options, which would detract from the traditional view of universities serving a liberal function of encouraging new and different ways of thinking. Adam (2004) also highlights some practical disadvantages of the use of learning outcomes focus on whether staff agreement on learning outcomes can be reached, and on the potential for learning outcomes to be too specific (causing a very narrow curriculum) or too general (which would in turn not be helpful to students or to staff in highlighting what should be covered within a course).

1.3Outcomes Based Education

Learning Outcomes are key to understanding the approach taken by Outcome Based Educators. Spady's work, which is a key text in this area, defines Outcomes Based Education as a:

"comprehensive approach to organizing and operating an education system that is focused on and defined by the successful demonstrations of learning sought from each student. Outcomes are … clear learning results that we want students to demonstrate at the end of significant learning experiences … and … are actions and performances that embody and reflect learner competence in using content, information, ideas, and tools successfully" (Spady, 1994:2).

The aim of Outcomes Based Education is to ensure that teaching, learning, and assessment are focused around what the student needs to learn, rather than ruled by other factors such as time pressures; students should be allowed progress according to their own rate of learning. Basically, the ideal is that the considerations that go into what constitutes a course should focus on academic issues, rather than be governed primarily by the time constraints that are common to educational settings working within a particular annual calendar.

In addition, outcome based models are generally criterion focused in terms of their standards – they are not driven by quotas or the need to grade against a curve. One must to some extent look to the end of a degree or a qualification, and think about what knowledge and skills students should have mastery of, and work backwards from this point. Spady (1994) gives a number of examples of outcome based models, for example: military training programs, scouting merit badges, karate instruction, and apprenticeship training in the skilled trades. It is worth highlighting that many of these are practically oriented areas.

Killen (2000, p. 3) notes three assumptions that underpin Outcomes Based education:

• All students can learn and succeed, but not all in the same time or in the same way.

• Successful learning promotes even more successful learning.

• Schools (and teachers) control the conditions that determine whether or not students are successful at school learning.

Derived from this are 4 principles:

- Clarify of focus: Ensuring that staff maintain a focus on what they want students to ultimately be able to accomplish
- Designing back: Engaging in a reverse form of engineering, to ensure that appropriate materials and support are in place to scaffold desired outcomes
- High Expectations for all students
- Expanded Opportunities: ensuring that there are multiple pathways to success to meet the needs of a range of students.

Designing back is a key practice – you must ensure that areas of the curriculum are relevant to the outcomes in order to be retained. Topic areas that are peripheral may need to be replaced within material or skills that are more directly relevant to the learning outcomes. Designing back requires skill and experience, in order to be accurately gauge potential issues, timings, and an awareness of how courses work in a particular institution.

These principles provide a very strong starting point to consider when planning a course. Within this approach, a course should be designed following the path set out in figure 1 below.

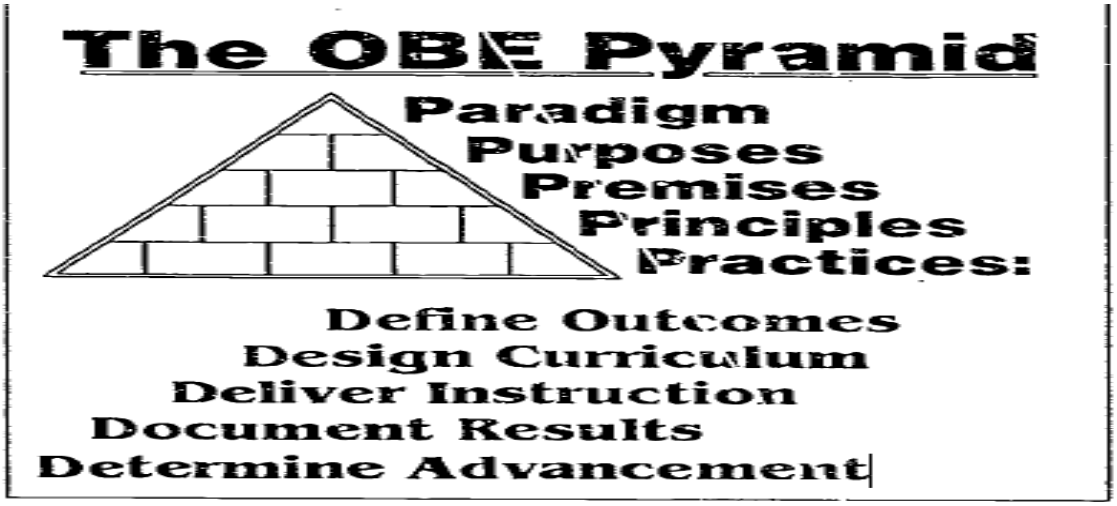


Figure 1. The Outcomes Based Education Pyramid (from Spady, 1994)

This can be further broken down. As a member of a programme/module team you will be involved in designing, or reviewing the design of, a programme or modules within it. The need to build an overall assessment strategy into the design of a programme cannot be too strongly emphasised. One approach is to consider the following model, setting out three stages of programme/module design.

Stage 1: Decide on the intended learning outcomes. What should the students be able to do on completion of the course, and what underpinning knowledge and understanding will they need in order to do it that they could not do when they started?

Stage 2: Devise the assessment task(s). If you have written precise learning outcomes this should be easy because the assessment should be whether or not they can satisfactorily demonstrate achievement of the outcomes.

Stage 3: Devise the learning activities necessary (including formative assessment tasks) to enable the students to satisfactorily undertake the assessment task(s).

These stages should be conducted iteratively, with each stage informing the others to ensure coherence.

Lawson & Askell Williams at Flinders University in Australia, when discussing Outcomes Based Education highlight its key role during the constructing new courses (2007, p. 4) state:

“Outcomes are frequently discussed when a new educational program, or a new curriculum, is being discussed. It is quite likely that in early planning meetings discussion will at some point focus on what students are expected to be able to do at the end of the period of schooling, or at the end of the program of study: “What should our students be able to do?” Discussion is also likely to develop about the qualities that students should possess when they graduate from the school or program: “What sort of people do we expect our graduates to be?” In both of these sets of discussion the focus is on outcomes. Curriculum planners could then proceed to plan the school curriculum or the program of study by working backwards from those primary objectives. “This is what we want to achieve, so what do we need to do to reach those objectives?” Indeed, at some point in the design of a curriculum it would be very difficult to avoid these considerations.”

However, this particular approach is not without criticism. McKernan (1993) for example cautions that teaching that already has a specific end in mind limits the possibility of educational experiences that are valuable for their own sake. They may also lead to the sort of narrowing down and “teaching to the test”, commonly referred to as the backwash effect in relation to the teaching of languages (e.g. Prodromou, 1995).

1.4Constructive Alignment

Moving on from Outcomes Based Education, Constructive Alignment is another, similar example of current thinking in Education. Constructive Alignment (Biggs, 1999) is one of the most influential ideas in higher education.

Once again, the focus is on looking at the inter-relationships between different aspects of teaching and learning, specifically, the relationships between teaching and learning activities, learning outcomes, and assessment activities (see Figure 2).

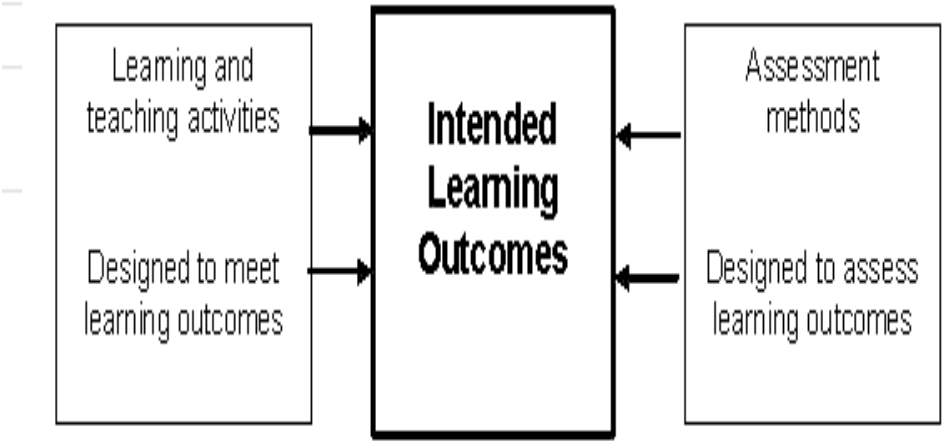


Figure 2. Constructive Alignment

According to Biggs (1999), this approach is based on constructivist principles, with the intention being to ensure that appropriate learning opportunities are provided to ensure that students construct and master the skills, and knowledge required for them in order to ensure they are able to meet the expectations for assessment, which in turn match the learning outcomes. Following on from this, there are two parts to constructive alignment:

- Students construct meaning from what they do to learn.
- The teacher aligns the planned learning activities with the learning outcomes.

A key aspect that differentiates Curriculum Alignment from Learning Outcomes, is that there is no specifically stated starting point in the process; outcomes may be revised in order to be aligned with teaching and/or assessment, rather than always

serving as a focal point. Rather, as seen in figure 3 below, the learner is thought to be the central figure to consider when thinking about how to constructively align all the elements.

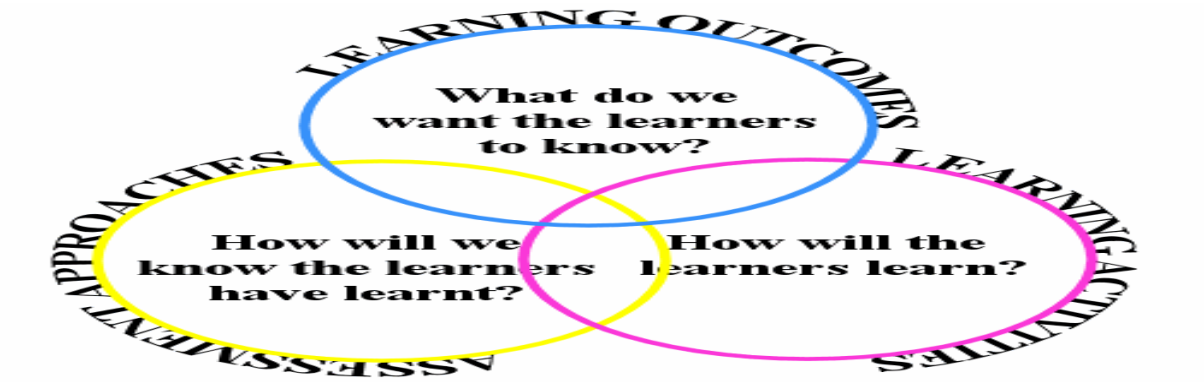


Figure 3. Constructive Alignment (adapted from Biggs, 1999)

1.4.1 Mapping

A key aspect in constructive alignment is to ensure appropriate mapping occurs across different aspects. A relatively straightforward six step process in relation to mapping is set out by Amundsen, Weston and McAlpine (2008). It involves the following steps:

1. Write down everything that comes to mind that you consider important in the course you are designing.
2. Go back and read through what you have written and try to reduce the number of ideas or concepts by circling those you consider most important.
3. Write each of the circled concepts on a post-it note.
4. Sort the post-it notes into meaningful clusters or groupings.

5. Label each cluster and write the labels on a post-it note. These labels will probably reflect the key concepts you will use in your map, but this may change.
6. Arrange these labels (key concepts) in a way that is meaningful to you.

   (Amundsen, Weston, & McAlpine, 2008, p. 652)

These were identified based on a process investigating the instructional decisions undertaken by staff across a range of discplines and courses, at a university in Canada.

1.4.2 Misalignment

One of the best ways to understand constructive alignment is to look at examples of misalignment. These include:

- Learning outcomes that are not clearly articulated: This can lead to student and staff uncertainty about the nature of a course, and what students should know and be able to do at the end of the course. This uncertainty can have a detrimental effect on student learning.
- Teacher-centered approaches to teaching: If a teacher has a preference to teach in a certain way, or to cover certain material, even if it is not directly relevant to the learning outcomes and the assessment (e.g. teaching material that can never be assessed), this is misaligned – students are being taught material that does not need to be covered. This can create confusion, and disaffection in the learners.
- Assessment methods that promote surface learning: If assessment methods do not encourage appropriate learning, by highlighting key

skills and knowledge, this can have detrimental effects. For broad, introductory courses in topic areas, multiple choice or short answer exams can often be appropriate, as the aim is to give students a broad overview of a range of topics. Using that same approach in more advanced undergraduate and postgraduate courses can however be misleading, as it does not give the student the opportunity, or does not highlight the need to be able to develop and demonstrate more indepth critical knowledge and insight.

1.4.3 Constructive Alignment and the SOLO taxonomy

The Structure of Observed Learning Outcomes was devised by Biggs and Collis (1982), and attempts to provide a set of progressively more complex levels of understanding, that can be applied across a number of disciplines, charting the trajectory from incompetence to expertise. They look at how initial superficial understanding can give way to deeper conceptual understanding.

Stage 1. Prestructural – this would exist formally outside the taxonomy, as it describes what someone who has yet to start formal study should be aware of.

Stage 2.Unstructured – this involves fairly concrete, superficial knowledge accumulation. Students will generally only be able to engage with one aspect of learning or a task.

Stage 3. Multistructural – At the multistructural level, multiple aspects of a task or of a specific topic can be known and understand, but the relationship between these aspects are missing.

Stage 4. Relational: At the relational level, the links between different ideas within a domain, and the different aspects of a task can be formally identified, as students gain a deeper appreciation

Stage 5. Extended Abstract: Students have a deep conceptual understanding which allows them to think in a variety of ways, to apply learning to different areas, and to reflect and adapt a skill to the demands of the context.

This taxonomy is interesting, and follows a trajectory that will be familiar to those who have engaged with Piagetian developmental theory.

1.4.4. Benefits and drawbacks of constructive alignment

The benefits to using constructive alignment are worth paying attention to:

- Constructive alignment leads to fairer and more reliable assessment. When assessment criteria follow from stated outcomes, decisions on how many marks are awarded are much easier to compare and defend. This makes tasks associated with Quality Assurance much more straightforward.
- Using Constructive Alignment, particularly if it is explicitly set out in the paperwork available to staff and students, there is greater transparency leading to (a) easier and more accurate inter-university and international comparisons, (b) students being able to focus more effectively on the key learning goals. This approach certainly supports students in being able to understand and take responsibility for their learning.
- Constructive alignment allows for a greater coherence in programmes of learning, as all aspects of the course have been thought through, and there are supportive interrelationships between all aspects.
- If utilised correctly, the sympathy between outcomes, teaching and learning, and assessment should produce an increase in the criticality and depth of student work, based on the transparency that constructive alignment provides.

Having identified key benefits to using constructive alignment, it is also important to think about the drawbacks in taking this approach:

- There are large workload considerations to be taken into account. The amount of planning that is involved in ensuring that all elements are aligned, when initially designing the course, and then running it, are substantial. The workload for academics is substantial as constructive alignment is an ongoing process, not a simple procedure that only needs to be done during initial planning of a course.
- Another drawback related to staff resistance to change. As noted above, there can be a substantial additional workload implication for taking this approach. This is both at the planning stage, and also continuously during teaching – ensuring that teaching is both relevant to assessment and outcomes, and to the students' needs. Where this requires a significant change in mindset from the philosophy underpinning a lecturer's approach to teaching, there can be quite a resistance to change. If the resistance leads to misalignment, then results will be problematic.
- A final drawback of this approach is the assumption it makes about students. Within this vision of teaching and learning, students are presumed to be engaged and attentive, as well as being goal focused. They engage with learning throughout a course, rather than leaving it until the last minute to do assignments. If students do not wish to engage with teaching, learning, and assessment in an ongoing manner, this approach, however well intentioned, may end up creating misalignment.

1.5 Assessment for Learning

The final general model that will be looked at here is called “Assessment for Learning”. Again, this approach can be seen to overlap with Outcomes Based Education, and with Constructive Alignment. Perhaps the key difference of this particular model is its’ specific focus on classroom based practice.

The work of the Assessment Reform Group (1999) in the UK has been key (Blandford and Knowles, 2012) in trying to eliminate what they see as an artificial boundary between assessment, teaching, and learning. They distinguish instead between “assessment of learning”, and “assessment for learning”. More recently, Earl (2003) added the term “assessment as learning” to further underscore the strong relationship that should exist between assessment and learning, and how educators should be assessing the knowledge and capacities of students to inform their teaching. This is highlighted in guidance given by the Higher Education Authority in England:

“Assessment shapes what students study, when they study, how much work they do and the approach they take to their learning. Consequently, assessment design is influential in determining the quality and amount of learning achieved by students, and if we wish to improve student learning, improving assessment should be our starting point” (HEA, 2012, p.9)

William (2011) in particular notes that consideration of assessment is key to effective instruction; close alignment of teaching, curriculum, and assessment are key (Brown, 2015), particularly insofar as assessment shapes the work that students put into their education. Adherents of assessment for learning highlight three problems which they believe that Assessment for learning can contribute towards addressing:

1) the assessment methods that teachers use are not effective in promoting good learning,

2) grading practices tend to emphasize competition rather than personal improvement,

3) assessment feedback often has a negative impact, particularly on low-achieving students, who are led to believe that they lack “ability” and so are not able to learn.

As Black et al (2004, p. 10) note, it is important to highlight that Assessment for Learning is a specific approach, to be distinguished from more general commentary and ideas around assessment:

- Assessment for learning is any assessment for which the first priority in its design and practice is to serve the purpose of promoting students’ learning.
- It differs from assessment designed primarily to serve the purposes of accountability, or of ranking, or of certifying competence. It is primarily Formative in focus, rather than Summative.
- An assessment activity can help learning if it provides information that teachers and their students can use as feedback in assessing themselves and one another and in modifying the teaching and learning activities in which they are engaged.

Following from this, the key principles of Assessment for Learning are as follows:

- Lecturers should sharing learning goals with students. These should be available prior to the beginning of a course, and be regularly shared within and across lectures.
- Lecturers should be helping students to recognise the standards they are aiming for.
- Lecture should involve students in assessing their own learning. Lectures should not be a passive experience for students; rather they should actively be given opportunities to engage with knowledge and activities to develop skills and depth of understanding of new concepts.
- Lectures should be providing feedback to students on a regular basis, which helps students to recognise what they must do to close any gaps in their knowledge or understanding

- Lecturers should be constantly communicating to students in a positive, constructive manner, to imbue them with the confidence that every student can improve
- Lecturers should be ready and willing to adjust their teaching approach and the material being used to take account of the results of assessment. This can include an acknowledgement that differentiation of materials may be required based on the diverse range of students that lecturers support.

From this list of principles, it should be clear that assessment for learning rests on the impetus and commitment of the lecture in engaging with students on an ongoing basis to modify and correct their teaching, to meet the needs of a particular cohort, or possibly an individual student. Figure 4 sets out how this would work in practice within a cycle. The process starts with the planning of a particular course or lecture. Planning of learning and assessment is done, and shared with students, to give them an opportunity to understand what will be expected of them. This is followed by teaching and assessment, which in turn is assessed and evaluated, with this information being used to revise and reteach, or revise following materials, as required.

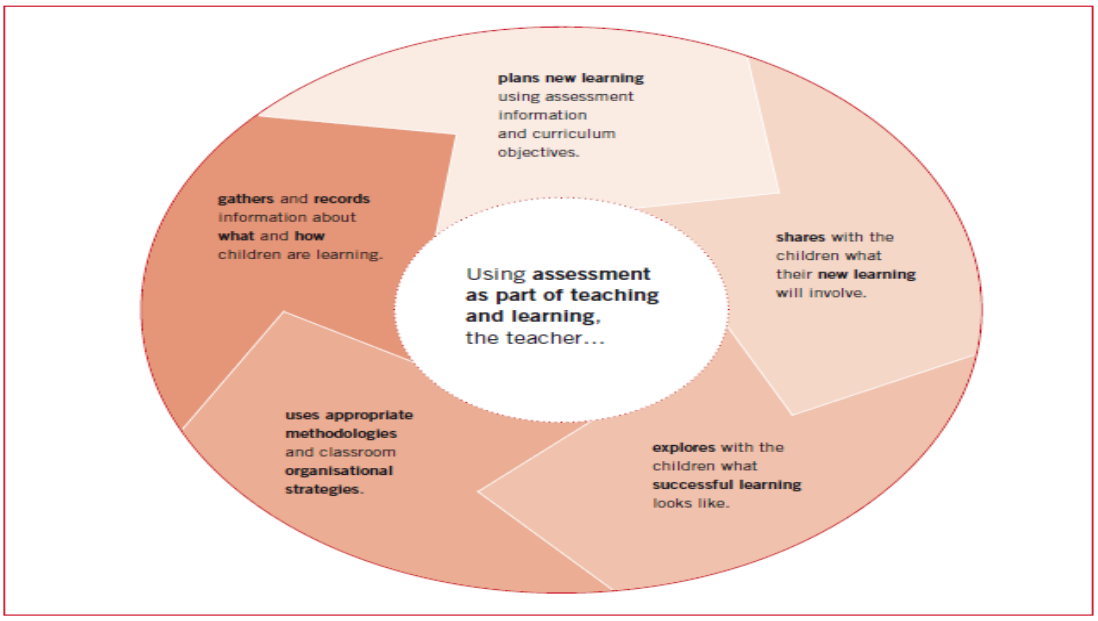


Figure 4. The Assessment for Learning Cycle

1.6 Differences between Undergraduate and Postgraduate Study

Having looked in detail at learning outcomes, and their link to teaching, learning, and assessment, this section will look at key distinctions made in relation to these areas in Undergraduate and Postgraduate study. While there must be a difference between undergraduate and postgraduate study, there is not always clarity on the nature of the distinction. This section will briefly cover major differences, with a particular focus on different expectations for academic writing, and for learning outcomes.

A first point to note, made by the Higher Education Academy (online) is that postgraduate study is generally driven by student choice to continue to develop expertise in their chosen field. This should boost their employability, and their financial prospects. Whereas undergraduate degrees often provide good specific as well as general/transferable skills, which lend themselves well to general graduate employment, postgraduate study generally leads to more specific, unique jobs. Postgraduate teacher training is a prime example of this.

Dr Sarah Norman (online) at the University of Oxford sets out a number of key differences between Undergraduate study and Postgraduate Study. She notes that a typical undergraduate course is timetabled for 9-5 study from Monday to Friday, with work driven by exams and assignments, which can include relatively short pieces of work and regular deadlines. On the other hand, postgraduate study is seen as less structured, with far fewer deadlines. The timetable tends to be less full, with less contact time. There is an expectation that students create their own timetable, driven by independent reading and study. In addition to differences in timetable, it is worth noting that typical fulltime undergraduate courses run for 3 years, whereas fulltime postgraduate taught courses typically run for 1 year.

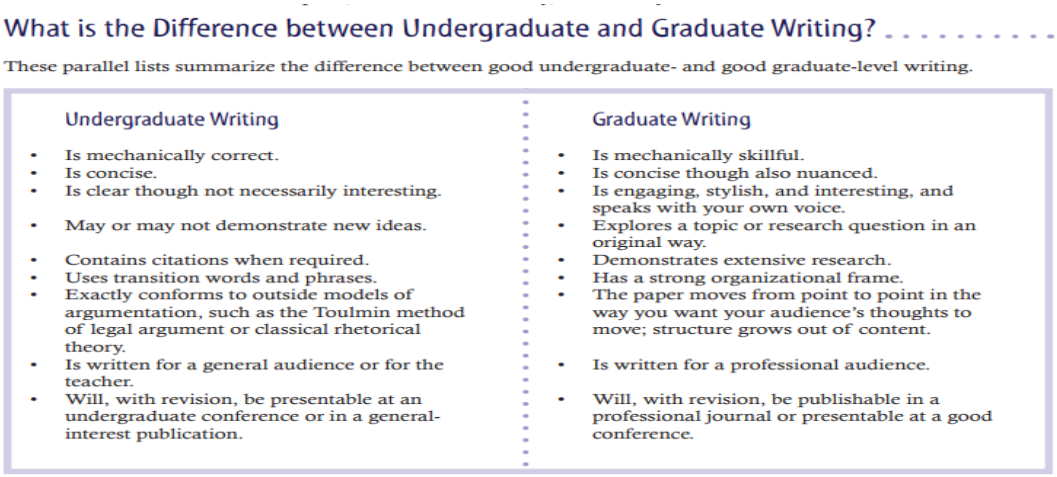
Linked to this, another key difference is the breadth and depth of study you are expected to do at postgraduate level. Monash University (online) note that breadth in this instance means that students should be comprehensive in relation to the reading and study of materials in their specific subject area. North Dakota State University (online) frames this as the expectation that students should work beyond a module, rather than confining themselves to engaging only with lecture notes and core texts. It might seem perverse to expect greater breadth and depth in study for a much shorter course. However, it must be noted that postgraduate study, which is often only open to the most capable students, does build on academic skills that have been built during 3 years of study at undergraduate degree.

Other major differences include cohort sizes – postgraduate study generally involves much smaller groups, which allows greater opportunity for group learning, collaboration, and discussion within or beyond formal teaching sessions. It is also possible that a postgraduate cohort will be more diverse, bringing a range of different experiences and perspectives.

1.6.1 Expectations for Academic Writing at Undergraduate and Postgraduate level

One area of continuity in academic writing at postgraduate level is the expectation that students should be able to reference accurately, and correctly cite research they have read. It is generally presumed that academic referencing skills will have been perfected during undergraduate study. There is also a great deal of similarity in terms of the range of assessment types used in undergraduate and postgraduate studies, though in some areas, exams may be less frequent at postgraduate level. It is generally expected that at both undergraduate and postgraduate level, in most academic areas that you will engage in at least one substantial piece of research as part of your studies. Monash University (online) note that a key difference in writing at undergraduate and postgraduate level relates to word lengths for assessments. At the University of Bedfordshire for example, undergraduate dissertations are typically 6,000-8,000 words, whereas at Postgraduate level, dissertations are typically 12,000 – 15,000 words.

Heady (online) highlights some continuities in expectations in academic writing between undergraduate and postgraduate level. These mainly relate to grammar and structure. A key difference expected in academic writing at postgraduate level is that you should be able to engage with and critique sources and evidence, rather than just describe. The differences (see figure 5) set out relate to increased skill, nuance, and perhaps most importantly of all, originality. One aspect that may help distinguish between undergraduate and postgraduate written work is the expectation that postgraduate work should be at, or close to the standard one would expect in published pieces of academic work.



What is the Difference between Undergraduate and Graduate Writing?

These parallel lists summarize the difference between good undergraduate- and good graduate-level writing.

Undergraduate Writing	Graduate Writing
• Is mechanically correct. • Is concise. • Is clear though not necessarily interesting. • May or may not demonstrate new ideas. • Contains citations when required. • Uses transition words and phrases. • Exactly conforms to outside models of argumentation, such as the Toulmin method of legal argument or classical rhetorical theory. • Is written for a general audience or for the teacher. • Will, with revision, be presentable at an undergraduate conference or in a general-interest publication.	• Is mechanically skillful. • Is concise though also nuanced. • Is engaging, stylish, and interesting, and speaks with your own voice. • Explores a topic or research question in an original way. • Demonstrates extensive research. • Has a strong organizational frame. • The paper moves from point to point in the way you want your audience's thoughts to move; structure grows out of content. • Is written for a professional audience. • Will, with revision, be publishable in a professional journal or presentable at a good conference.

Figure 5. The differences between undergraduate and postgraduate writing (from Heady, [online])

1.6.2 Differences between learning outcomes at Undergraduate and Postgraduate Level

The Dublin Descriptors (Joint Quality Initiative Informal Group, 2004) clarify the distinctions between the 2 levels of study (See table 4). Undergraduate study largely focuses on ensuring students have understanding of core concepts, understand arguments, and are able to collect and analyse data to address issues in their subject area. At postgraduate level, a certain level of originality, independence, and mastery is expected. Students at postgraduate level should have well developed problem solving skills in their academic area, to be able to deal with complex issues, and to be able to communicate what they have learnt to specialist and non-specialist groups. They are also expected to be more self-driven and autonomous, rather than being largely directed by academic staff.

Table 4. The Dublin Descriptors, distinguishing differences between expectations for undergraduate and postgraduate study.

	Bachelor	Master
Knowledge and understanding	[is] supported by advanced text books [with] some aspects informed by knowledge at the forefront of their field of study ..	provides a basis or opportunity for originality in developing or applying ideas often in a research* context ..
Applying knowledge and understanding	[through] devising and sustaining arguments	[through] problem solving abilities [applied] in new or unfamiliar environments within broader (or multidisciplinary) contexts ..

Making judgements	involves] gathering and interpreting relevant data ..	[demonstrates] the ability to integrate knowledge and handle complexity, and formulate judgements with incomplete data ..
Communication	[of] information, ideas, problems and solutions ..	[of] their conclusions and the underpinning knowledge and rationale (restricted scope) to specialist and non-specialist audiences (monologue) ..
Learning skills	have developed those skills needed to study further with a high level of autonomy ..	study in a manner that may be largely self-directed or autonomous..

The QAA (online) make similar comments in relation to what is expected of a master's course and a masters' graduate in the UK. They state that:

"graduates of all master's degrees should be capable of demonstrating a systematic understanding of knowledge, much of which is at, or informed by, the forefront of the discipline, field of study or area of professional practice. They should be capable of demonstrating originality in their application of that knowledge and in addressing problems. They will have demonstrated a comprehensive understanding of the techniques applicable to their own research or advanced scholarship. In relation to future employment, master's graduates will be expected to possess the skills needed to exercise independent learning and to develop new skills to a high level." (QAA, online)

1.7 Summary

It is clear that there is a large degree of overlap between the 3 concepts that have been discussed in this chapter. They all highlight the fundamental interconnectedness between curriculum, teaching and assessment. As such, it is clear that:

- No single one of these aspects should dominate decisions to be made about courses
- One needs to keep in mind that decisions made in relation to one aspect will impact on the others
- There is a need to maintain balance between curriculum, teaching, and assessment whenever new courses, or changes to existing courses, are being considered.

2. Assessment

2.1 What does Assessment Mean?

Assessment is a complex concept, sometimes seen as synonymous with the term evaluation (Hutchinson and Young, 2011), and is a cause for fierce debate among educators (Brown, 2015). Assessment can serve a number of purposes (Pellegrino et al, 2011); Brown, Irwing and Keegan (2008) for example identify 4 categories of understandings of assessment, while Fletcher and Shaw (2012) note that the range of purposes assessment covers range from supporting learning in the classroom, to allowing for the evaluation of standards at school and national/international level. In addition, Harlen (2009) notes that consideration needs to be given to the validity (in relation to purpose), reliability, impact, and practicality of an assessment.

In the UK, the Quality Assurance Agency (QAA) for Higher education defines Assessment as: 'any processes that appraise an individual's knowledge, understanding, abilities or skills'. (QAA, 2012, p. 4). This begins to list a number of qualities that can be assessed. There are a number of characteristics of an individual that may be assessed:

- Learning
- Knowledge
- Skill
- Ability
- Aptitude

The aspect to be assessed should depend on the learning context in which the assessment sits. Aptitude for example, is not generally something that is assessed in a Higher Education Context. Similarly, skills are more appropriately measured when specific physical or mental processes form an important part of the qualification.

Moving on, other definitions of Assessment provide another dimension worth considering. The Assessment Reform Group in the UK, for example, provide the following definition for assessment:

"the process of seeking and interpreting evidence for use by learners and their teachers, to identify where the learners are in their learning, where they need to go, and how best to get there" (ARG, 2002, p2-3)

From both of the definitions included above, it is clear first, that assessment is a process. It focuses on specific aspects, focusing on a students' current capabilities, skills, or knowledge and understanding. The additional aspect highlighted by the Assessment Reform Group is that assessment can serve dual purposes – not just telling us about the current status of a student, but providing information to allow us to inform how to further support and guide a student to ensure improvement and continued success.

A final definition worth highlighting is: "*Assessment defines what students regard as important, how they spend their time and how they come to see themselves as students and then as graduates*". (Brown, Bull and Pendlebury, 1997, p. 7). This serves to highlight that the perspectives that students have in relation to assessment may differ from academics.

As the QAA (2012) notes, assessment has different meanings for students, academics, and institutions, and other relevant stakeholders;

For the student, an assessment may be a key motivator for study; they need to cover and understand materials in order to pass an assignment.

For the Academic, assessment is an opportunity to evaluate the level that students are operating at; it can serve the dual purpose of giving information about the standing of the students, but also the effectiveness of the teaching and the study materials provided. For an academic, assessment may also provide a substantial burden, due to the time required to mark and provide feedback

For the institution, assessment allows the setting the basis for decisions about whether students are allowed to proceed and continue their study, and whether they can be awarded a specific qualification. Statistics generated by the assessment process can support the activities of Quality Assurance.

Other stakeholders also have an interest in the assessment process. Where qualifications are linked to external accreditation, for example National processes linked to formal teacher qualification and certification, the assessment process can provide independent regulatory bodies evidence that students who have completed a qualification have the appropriate competences to become a recognised member of their organisation. The assessment processes ensure that these students are fit to practice within a particular area. In teacher education courses, it is often fundamental for a course to be recognised by an independent national body, which confers upon students the ability to be licensed to teach, as a result of a teaching qualification.

2.2 Summative and Formative Assessment

As well as having different aspects, depending on the audience, assessment can also serve different purposes. The University of Ulster (2017, p3-4) recognises the following purposes that assessment can serve

- *Diagnostic assessment* provides an indicator of a student's aptitude and preparedness for a programme of study and identifies possible learning problems.
- *Formative assessment* is designed to provide students with feedback on progress and inform development.
- *Summative assessment* provides a measure of achievement made in respect of a student's performance in relation to the intended learning outcomes of the module and/or programme of study.

The QAA (2012, p. 5) highlight the following aspects of Formative and Summative Assessment:

Formative assessment has a developmental purpose and is designed to help learners learn more effectively by giving them feedback on their performance and on how it can be improved and/or maintained. Reflective practice by students sometimes contributes to formative assessment.

Summative assessment is used to indicate the extent of a learner's success in meeting the assessment criteria used to gauge the intended learning outcomes of a module or programme.

Building on this, formative assessment is key in ensuring that students are given an opportunity to display their current level of understanding/ability, so that academics can provide feedback, and/or restructure their teaching to support students to achieve required learning outcomes. Formative Assessment and Formative Feedback are key aspects of Assessment for Learning, covered in chapter 1. It is important to note that formative assessment is not seen simply as a replacement for summative assessment; rather, students should be given opportunities to demonstrate their current understanding and abilities, so that academics can provide their input, to ensure that students are on track to succeed in their studies. Ideally, summative and formative assessment processes should work in a complementary fashion.

Summative assessment attempts to give a final, measured and considered judgement in relation to student learning. It sets out in some metric form how well students have met the criteria linked to that summative assessment, which more broadly informs the quality of learning in a course.

Summative assessment can be mapped against a specific, often externally set benchmark, indicating that you have passed the expected threshold standard in order to merit a particular award, or demonstrate recognised competence in a field.

Summative assessment may be criterion referenced. In these instances, specific marks, knowledge, and standards of skills are required for a certain grade (e. A, B, C, D E, F grades ….).

Summative assessment may also use a norm-referenced format for arriving at a final grade – in this instance, a grade indicates your position in the normal distribution, relative to other students, rather than your overall performance. In practice, this could mean that the top 10% of students in a test would get an A grade, regardless of their actual performance. Similarly, the bottom 10% may get a failing grade, no matter the actual quality of their work.

Summative assessment is characterised as assessment of learning – what do students know now, having completed a specific aspect of their study, or more generally what is their standing upon completion of a degree (e.g have they passed a degree at all, will they achieve a first, 2.1, etc… and/or what is their overall GPA, depending on the system in which the university works).

Figure 6 below indicates the differences between summative and formative assessment, but more importantly highlights the commonalities, as important, complementary strategies for assessing student knowledge and progress.

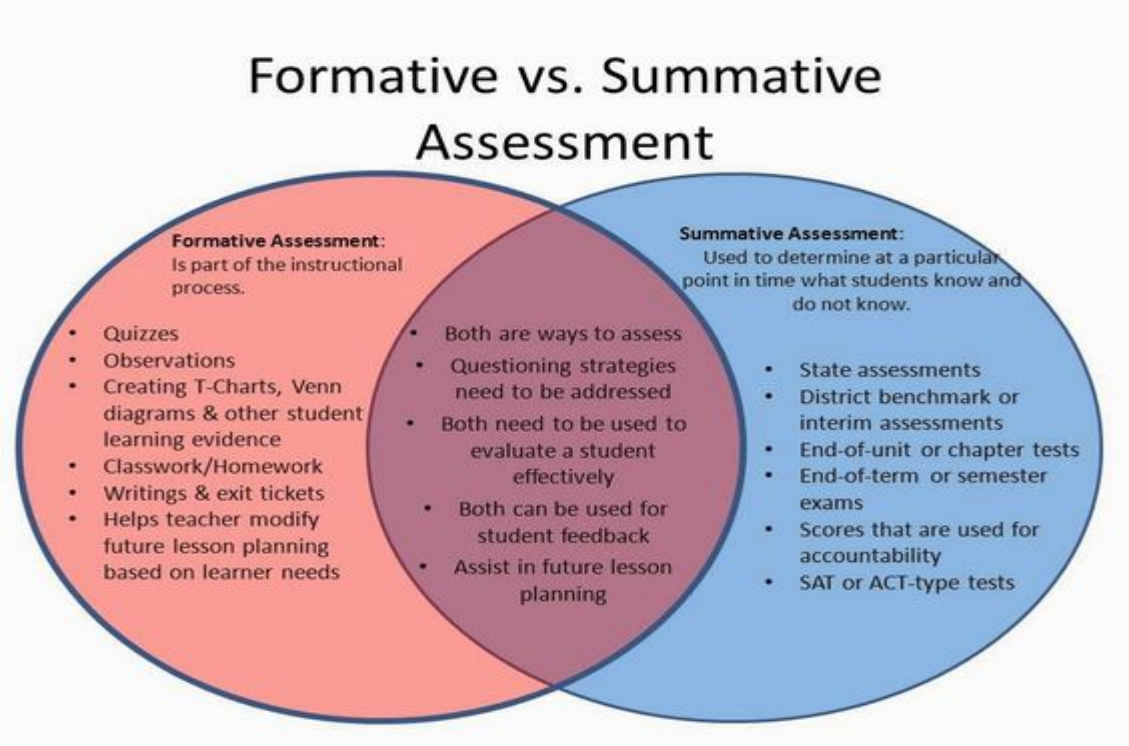


Figure 6. A venn diagram indicating the similarities and differences between formative and summative assessment available at: https://www.tes.com/lessons/GAI19XamCqGAjQ/formative-assessments)

2.3.Formative & Summative Feedback

Sitting beneath summative and formative assessment is summative and formative feedback. Feedback is the summation of the views of the marker on the quality of the assessment work produced by the student. It is worth highlighting at this point the status and importance of feedback. The feedback provided, whether numeric or verbal, is based on the academic expertise of staff, and their knowledge of conventions within the specific academic field. Beyond teaching, feedback is perhaps the most important opportunity for academics to transmit this expertise (Hattie, 1999), either individually, or to groups.

Formative feedback should be qualitative in nature, giving students specific insight into the standard and quality of work produced. This feedback sits outside of formal

grading or marking on a scale, and should serve to inform students as to their current level of performance, and provide advice in relation to areas which can be improved, and how the student can do so.

Feedback can be provided on the following aspects of a students' work:

- criteria
- subject understanding
- alignment to learning outcomes
- communication skills
- academic skills
- style and approach
- transferable skills
- student effort

(Irons 2007, p.38)

Following from this, Irons (2006, p. 7.) describes summative feedback as follows:

"Any assessment activity which results in a mark or grade which is subsequently used as a judgement on student performance. Ultimately judgements using summative assessment marks will be used to determine the classification of award at the end of a course or programme." A piece of summative feedback will clearly identify the students' level of performance, and may justify this judgement – it will not however necessarily aim to provide student insight into how to improve their work.

Feedback can be key in supporting student development. However, as the QAA (2012) note, evaluating the effectiveness of feedback is not a simple task. If, for example, students do not recognise and engage with formative feedback, then it ultimately will not serve its intended purpose. Ideally however, formative assessment

should work in an iterative cycle to produce gradual, incremental improvements in students across the duration of a specific aspect of their studies.

This works best when formative feedback is truly interactive; when the feedback, either directly or indirectly, provides the opportunity for a continued 2-way conversation between the academic and the student in relation to the quality of the work, strengths, and areas for development. Formative feedback can be very granular, focusing on specific mechanisms underpinning one assessment, or they can cover more general, crosscutting topics (e.g. academic writing, referencing, critical analytical skills, etc..)

2.4. Why is feedback important?

Feedback is potentially key in supporting learning, as it has a potentially significant contribution to achievement (Hattie & Timperley, 2007). This potential can only be fulfilled however when the feedback is of sufficient quality, with Hattie and Temperley (2007) noting that feedback was most effective when it involved informative feedback about a task, with a focus on effective performance. However, feedback that focuses on "praise, rewards, and punishment" (Hattie and Temperley, 2007) was found to be less effective.

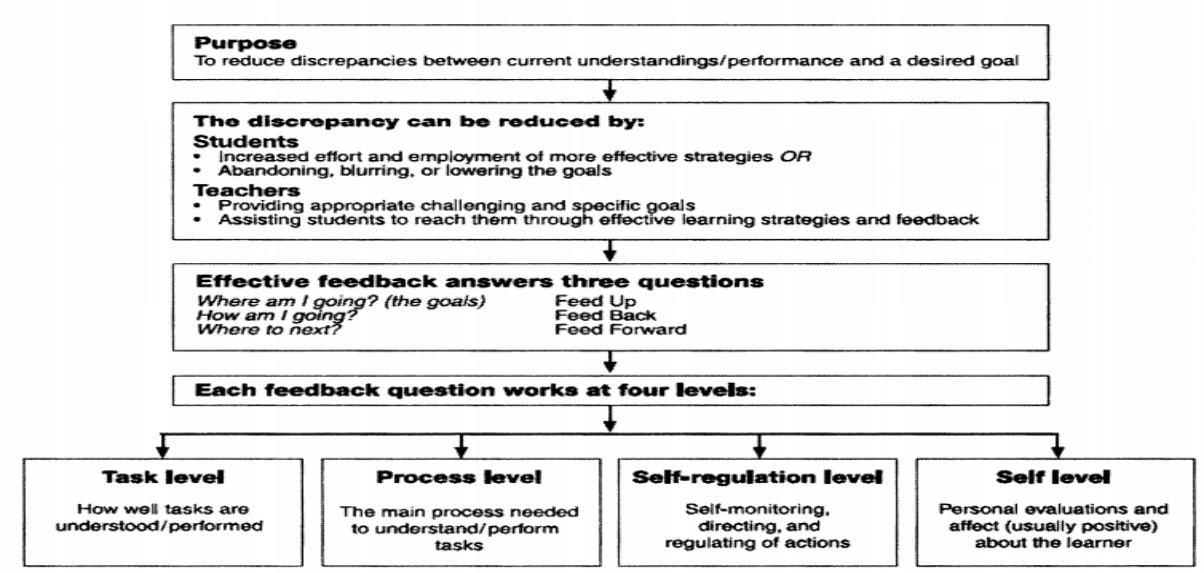


Figure 7. A model of feedback to enhance learning (taken from Hattie & Temperley, 2007)

Figure 7 helps to highlight 3 questions which should be reflected on when producing feedback:

1. Where am I going?

   This relates to the endpoint, the goal of the assessment, and how they are doing in that regard – whether they have passed, etc.

2. How am I going?

   This aspect involves linking performance relative to a specific goal or standard – are they progressing, are they doing better then previously, or better than the average..

3. Where to next?

These types of questions focus on what can be done to improve performance, to enhance skills and knowledge skills assessed. It also refers to what you need to build on in relation to a future assessment that builds on this work.

Hattie and Timperley (2007) follow this through in figure 7, to identify 4 levels at which each feedback question can be asked:

- Feedback about the task (e.g. the specific activity, test, essay, etc.)
- Feedback about the processing of the task: this focuses on the extent to which students have demonstrated superficial or deep level understanding of the task
- Feedback about self-regulation: this looks at psychological aspects – commitment, control, confidence, motivation: how do we ensure, as much as possible, that students will remain psychologically invested in engaging with feedback to continue to improve?
- Feedback about the self as a person: In relation to this, Hattie and Timperley (2007, p 96) state “We include a final level of feedback not because it is effective but because it is often present in class situations and too often used instead of FT, FP, or FR (feedback about task, feedback about processing,

feedback about self-regulation, Bond, Smith, Baker, & Hattie, 2000). Personal feedback, such as "Good girl" or "Great effort," typically expresses positive (and sometimes negative) evaluations and affect about the student (Brophy, 1981). It usually contains little task-related information and is rarely converted into more engagement, commitment to the learning goals, enhanced self-efficacy, or understanding about the task. FS (feedback about the self) can have an impact on learning only if it leads to changes in students' effort, engagement, or feelings of efficacy in relation to the learning or to the strategies they use when attempting to understand tasks."

2.5 Staff and Student Views on Feedback

It is perhaps not surprising to hear that academics and students have different views on assessment and feedback. The University of New South Wales in Australia (Online), for example, notes that students can find feedback unconstructive, for a number of reasons:

- When feedback is cryptic (for example, "More", "What's this?", "Link?", or simply ticks and crosses)
- When feedback consists mainly of grammar and spelling corrections, and provides little or no advice for them to act on,
- Feedback that does not acknowledge the way students' learning has progressed over time does not help them get a sense of how far they have come and what they have yet to achieve,
- Students can encounter different (and inconsistent) comments from different lecturers on similar pieces of writing,

Other comments that the author has encountered from students includes:

- Feedback which is not given in a timely manner

- Feedback that is overly critical
- Feedback where the written commentary does not obviously match the summative grade given
- Feedback which seems to be written to demonstrate the academics' knowledge, but does not necessarily benefit the student.

The issue of timeliness can be key. In order for feedback to be effective, particularly in hierarchically structured courses, feedback for one assessment can be key in ensuring that students have an opportunity to improve the quality of their work for the next assessment. In modern academic environments, where courses rely less on single end of course written examinations, constructive and timely feedback is key.

Interestingly, the University of New South Wales (Online) also provides some commentary on challenges faced by staff in relation to the provision of feedback:

- Preparing good-quality assessment feedback for students is very time-consuming, for staff who have a wide range of other responsibilities, and often have to mark a large amount of work in a short time.
- When evidence suggests that students have not read the feedback or acted on it, teachers see time and effort put into providing feedback as wasted.
- Giving feedback can be repetitive and unproductive. Academics often find themselves giving the same or very similar feedback to many students, or giving the same feedback to repeated efforts by one student, with no change occurring in that student's performance.
- Students can focus on negative comments and fail to register positive comments.

Duncan (2007) notes that it is common for teachers to highlight that students do not engage with and read the written feedback that has been provided for their benefit. It is interesting to note that a university of Waikato handbook focusing on feedback to

promote student learning (Spiller, 2009, p. 3), highlights this issue, stating that a potential reason for this is that

“a part of the problem is that teachers (and students) see feedback in isolation from other aspects of the teaching and learning process, and consider feedback to be primarily a teacher-owned endeavour... Correspondingly, the literature suggests that the feedback process is most effective when all the protagonists are actively involved in the process.”

They suggest a number of ways to engage students, for example breaking an assignment into a series of stages, with feedback from one stage having an explicit and obvious impact on the following section. Another strategy highlighted is to provide provisional grades, with the proviso that students can then come and meet staff to discuss, and potentially improve their grade.

Practices in relation to feedback can vary greatly. Individual Personalised Feedback is common, but as the HEA (2013, p 61) notes:

“When dealing with a large set of assignments, which frequently results in repeated use of similar comments, an effective time-saving strategy can be a generic report outlining common weaknesses and strengths. You may be able to provide such generic group feedback to the whole cohort more quickly than individualised feedback which is dependent on the full moderation process and it may help to encourage students to pay attention to the individualised feedback later. Remember however, that going on to supplement such generic feedback with individual comments is important to support students' understanding of the relevance and application to their own work.”

2.6. Rubrics

A relatively quick method used to provide students with generic, but specifically applicable feedback is to make use of a rubric when giving feedback. Rubrics are an assessment tool which can be used to evaluate student performance over a range of criteria. A rubric normally comprises three main features (Reddy and Andrade, 2010):

- Evaluation criteria: which are usually mapped to the learning outcomes or competencies that are to be measured;
- Quality criteria: qualitative descriptions of what is expected for a given grade or mark;
- Scoring system: Grade ranges or degree classifications mapped to the quality description

Please see appendix 2 for a range of examples of rubrics, that have been used by Higher Education Institutions in the UK, for the purposes of assessing Dissertations.

Although the examples vary markedly, a key commonality between all of them is a focus on specific areas of interest; which are then categorised via grade, with a brief description within each cell about the standard one would expect for a particular aspect in order to merit a grade, between distinction and fail. These brief pieces of text are to be used by assessors when marking a dissertation, in order to decide and justify a grade given to a particular aspect of the dissertation. Their purpose is primarily summative, but does give a clearer indication to students about the standard of the work, compared to a simple grade. Rubrics also allow students to see whether there are specific aspects of their assignment that they fell short in. These rubrics are of course only useful and appropriate if the student is aware of them, or they are clearly aligned to learning outcomes and/or assessment criteria made available to students.

2.7 Marking, Moderation, and Quality Assurance

In relation to marking and moderation, a number of terms are common in Uk higher education settings (QAA, 2012):

1. Anonymous Marking: where the academic is not aware of the identity of the student whose work is being marked.
2. Second Marking: where another person marks the work, This can be further subdivided into:

- Open marking: where the second marker knows the mark allocated by the first marker before they start marking
- Closed/Blind marking: where they are completely unaware of the grade given by the other marker
- Independent/double marking: where each marker works separately, and where if there is disagreement, a resolution is sought
- Check marking: involves relatively brief scrutiny to ensure that the mark awarded by the first marker is appropriate.

This process of second marking, to minimise the possibilities of individual bias on behalf of a single marker is called moderation. In a study of quality assurance processes in the UK, the Netherlands, and the Czech Republic, Kohoutek (2014) notes that moderation processes of this nature seem to be far more established in the UK than in the other countries.

In their policy in relation to verification of assessment and standardisation of marking, Sheffield Hallam University states (online):

“Moderation is employed to ensure that academic standards are appropriate, that marking is regulated within agreed norms or against predetermined marking criteria across a module/course. It also ensures that the assessment outcomes for students are fair and reliable. It is undertaken internally and externally. Moderation can be undertaken by reviewing a sample of student work, or by second marking. Second marking results in a single, agreed mark.”

Nottingham Trent (2012, p 7) interestingly relate moderation to ensuring the "fairness, validity, reliability and rigour of the procedure" of assessment. Similar aspects are identified in reviews of university policy by Bloxham, Hughes, & Adie, (2016). Bloxham, Hughes & Adie (2016) also identify a number of broader moderation activities (see table 5).

Table 5. Moderation activities that can be undertaken at different stages of the process of assessment (from Bloxham, Hughes, & Adie, 2016)

Stage of the assessment process	**Moderation focus**	**Illustrative moderation activities**
1. Design	Quality of tasks and overall plan (course and program)	Peer scrutiny (eg informal consideration by course teams or formal committee approval) Professional accreditation process
2. Calibration	Shared understanding of task specification, requirements, performance criteria and standards	Informal processes (e.g. socialisation) Formal Processes (e.g. mentoring, workshops involving comparison)
3. Judgements	Quality of judgements as evidenced by: - Adherence to criteria - Credibility of evidence - Shared standards - Consistency of judgement	Second, double or collaborative marking Random checking Consensus moderation discussions Consideration of grade distributions
4. External Validation / Comparison	Comparability/benchmarking of standards	External examining Peer review/verification Professional accreditation processes
5. Monitoring Evaluation	Overall quality of assessment and of components of individual stages	Consideration of: Student work samples Student satisfaction data Examiners' reports Grade distributions Lecturer perceptions (adequacy task design and

		information, criteria and standards, marking guides etc.)

This includes external moderation processes, which are relatively unique to the UK – it is common practice for courses to have 1 or more external examiners. These external examiners who run similar courses in other institutions in the UK. These external examiners will look at examples of assessed student work, and can provide input on the fairness of the assessment procedure, as well as being able to give an insight into whether the work produced in the institution is similar to what is seen at other institutions – are they in line with national norms in the subject area?

These moderations are a key aspect of modern Quality Assurance processes in Higher Education Institutions in the UK. While there is some variety in how UK universities moderate student work, the underpinning of the need for independent moderation processes is underpinned nationally by the Quality Assurance Agency (www.qaa.ac.uk) for Higher Education, whose quality code all universities in the UK must comply with in order to be allowed to award degrees.

3. Exploring Different Assessment Methods in Higher Education:

It is expected that within a programme, the following factors should be taken into account when considering assessment strategy:

- Ensuring that students experience a range of different assessments
- Ensuring that assessments are appropriate to the learning outcomes in a particular course: assessments have to be correctly mapped to learning outcomes, and all learning outcomes need to be assessed
- Ensuring that the timing of assessments is appropriately spread out across and within semesters.
- Ensuring that students have appropriate points during the semester where they may get formative feedback on their progress as relevant
- The number of assessments that are required in a module (depending on its size), and the % weighting of each assessment.
- Is the assessment strategy equitable for students?
- Is the assessment strategy realistic for staff?

Writing in a blog for the HEA, Fiona Saunders (2015, online) states:

“So in the world of academic assessment, a group presentation may be manageable for staff to mark, and meaningful for students in terms of learning but can it be truly equitable to all students, with rewards proportional to the amount of effort and contribution made by each individual student? Even with an element of peer assessment I remain to be convinced……Conversely, a traditional 2 hour written examination is equitable to all students, and reasonably meaningful in terms of measuring learning outcomes but ask any academic faced with turning around 300 exam scripts in 7 days whether this is a manageable and sustainable state of affairs and you will likely be greeted with derision, if not a stream of unrepeatable abuse!”

The factors set out above are in line with the approaches to teaching and learning set out in chapter 1 of this handbook in particular. In this chapter, the focus will be on exploring the range of different types of methods available to staff to assess students’ knowledge and skills, and their particular characteristics.

3.1 Types of Assessment

Table 6 below gives an overview of different types of assignment currently in used across graduate and postgraduate courses at the University of Bedfordshire. There are a number of major categories, including Exam, Written Assignment, Report, and Practical Skills. There are numerous subtypes for these types of assessment, some of which are likely to subject specific.

Table 6. Different Types of Assessment used at the University of Bedfordshire

Type	Subtype
Exam	Unseen exam, Case study examination, Computer based examination, In-class test,
Written Assignment	Essay, Case Study, Literature Review, Reflective Writing, Journal
Portfolio	
Report	Individual Report, Group Report, Laboratory Report, Field Work, Work-Based Report, Poster, Problem-Based Report
Dissertation	Exhibition, Artefact
Oral Presentation	Viva
Practical skills	Laboratory-based, performance, placement

Biggs (2003, see table 7) provides another way to classify and organise different types of assessment, and importantly makes some links to which types of assessment link to particular types of learning. These will be discussed in more detail in the following sections.

Table 7. Range of Different Types of student assessment, and what they are likely to assess (from Biggs, 2002)

Assessment mode	Most likely kind of learning assessed
Extended prose, essay-type	
Essay exam	Rote, question spotting, speed structuring
Open book	As for exam, but less memory, coverage
Assignment, take home	Read widely, interrelate, organise, apply, copy
Objective test	
Multiple choice	Recognition, strategy, comprehension, coverage
Ordered outcome	Hierarchies of understanding
Performance assessment	
Practicum	Skills needed in real life
Seminar, presentation	Communication skills
Critical incidents	Reflection, application, sense of relevance
Project	Application, research skills
Reflective journal	Reflection, application, sense of relevance
Case study, problems	Application, professional skills
Portfolio	Reflection, creativity, unintended outcomes
Rapid assessments (large class)	
Concept maps	Coverage, relationships
Venn diagrams	Relationships
Three minute essay	Level of understanding, sense of relevance
Gobbets	Realising the importance of significant detail
Short answer	Recall units of information, coverage
Letter-to-a-friend	Holistic understanding, application, reflection
Cloze	Comprehension of main ideas

3.2 Exams

3.2.1 When are exams appropriate?

Traditional exams are considered high stakes forms of assessment, which may either be highly motivating, or highly stressful for students. An effective examination should be a learning, as well as an evaluative, experience. It should serve as a thorough review of the content addressed, enabling students to deepen their mastery of the concepts included.

Nottingham Trent University distinguish between 3 types of exam, and note (see table 8) when they might be appropriate to use. The difference between seen and unseen examinations are key. Unseen examinations have for a long time been the standard form of examination, but novel approaches, that allow students greater latitude to engage with notes/textbooks do have their uses.

Table 8. Different types of exams and their characteristics

Type of exam	Description	Useful for assessing
Unseen Examination	Students do not know what the questions will be in advance of the exam.	Memory, quick interpretation of information of questions, speed of thinking and analysis, ability to organise answers quickly, Skills of identifying key information or data and summarising it quickly, Ability to stay calm and focused under time pressure, Ensures that the work produced is by the student with little chance of plagiarism or collusion
Seen examinations	Students will have been provided with the questions in advance of the exam.	Memory and the ability to research known questions, Ability to research complex topics or issues, Greater importance is attached to the structure of answers, less emphasis on writing or thinking quickly

Open Book Examinations	Students may use notes or in some cases textbooks. This may be conducted in more traditional, timed exam settings, or may be a take home exam. Students may have been given the question or topic in advance.	Ability to use and consult sources, less emphasis on memory, Ability to work under time pressure.

The University of Michigan (see table 9) make a distinction between different types of questions that can be asked within an exam, including multiple choice questions, which will be included in the next section. The main types of exam questions to focus on here are the short answer and essay based questions.

Table 9. Different types of exam items and their advantages and disadvantages

Type of Item	Advantages	Disadvantages
True-False	Many items can be administered in a relatively short time. Moderately easy to write; easily scored.	Limited primarily to testing knowledge of information. Easy to guess correctly on many items, even if material has not been mastered.
Multiple-Choice	Can be used to assess broad range of content in a brief period. Skillfully written items can measure higher order cognitive skills. Can be scored quickly.	Difficult and time consuming to write good items. Possible to assess higher order cognitive skills, but most items assess only knowledge. Some correct answers can be guesses.
Matching	Items can be written quickly. A broad range of content can be assessed. Scoring can be done efficiently.	Higher order cognitive skills are difficult to assess.
Short Answer or Completion	Many can be administered in a brief amount of time. Relatively efficient to score. Moderately easy to write.	Difficult to identify defensible criteria for correct answers. Limited to questions that can be answered or completed in very few words.
Essay	Can be used to measure higher order cognitive skills. Relatively easy to write questions. Difficult for respondent to get correct answer by guessing.	Time consuming to administer and score. Difficult to identify reliable criteria for scoring. Only a limited range of content can be sampled during any one testing period.

In relation to essay focused exams, the University of Washington (online) highlights that this is an appropriate assessment tool when :

- When you are measuring students' ability to analyse, synthesize, or evaluate
- When you have been teaching at these levels (i.e. writing intensive courses, upper-division undergraduate seminars, graduate courses) or the content lends itself to more critical analysis as opposed to recalling information

The University of Washington use the following quote to highlight the importance that essay-based exams can have:

“Essay tests let students display their overall understanding of a topic and demonstrate their ability to think critically, organize their thoughts, and be creative and original. While essay and short-answer questions are easier to design than multiple-choice tests, they are more difficult and time-consuming to score. Moreover, essay tests can suffer from unreliable grading; that is, grades on the same response may vary from reader to reader or from time to time by the same reader. For this reason, some faculty prefer short-answer items to essay tests. On the other hand, essay tests are the best measure of students’ skills in higher-order thinking and written expression.”

3.2.2 Designing exams and exam questions

Exams and the questions included in a particular exam must be carefully selected, in order to provide a fair opportunity for students (e.g. they must not be too easy or too hard), whilst meeting the learning outcomes, and covering what has been taught within a module. One must consider how many questions to ask, how many different types of questions to ask, the amount of time students should take to ask each question, the weighting for each question, the depth of knowledge and critical insight expected, etc. Carnegie Mellon (online), highlight the following as key steps to take when designing exams and exam questions:

1. Choose appropriate item types for your objectives
2. Highlight how the exam aligns with course objectives
3. Write instructions that are clear, explicit, and unambiguous
4. Write instructions that preview the exam
5. Word questions clearly and simply
6. Enlist a colleague to read through your exam
7. Think about how long it will take students to complete the exam
8. Consider the point value of different question types
9. Think ahead to how you will score students’ work

In relation to the design and wording of essay based exam questions, the University of Washington (online) recommend that academics should:

- Be specific
- Use words and phrases that alert students to the kind of thinking you expect; for example, identify, compare, or critique

- Indicate with points (or time limits) the approximate amount of time students should spend on each question and the level of detail expected in their responses
- Be aware of time; practice taking the exam yourself or ask a colleague to look at the questions

The University of Washington (online) provides further advice on how academics can support students to prepare for exams:

- Use study questions that ask for the same kind of thinking you expect on exams
- During lecture or discussion emphasize examples of thinking that would be appropriate on essay exams
- Provide practice exams or sample test questions
- Show examples of successful exam answers

They also encourage academics to reflect and evaluate their own exams, asking the following questions:

- **Did I test for what I thought I was testing for?**
  If you wanted to know whether students could apply a concept to a new situation, but mostly asked questions determining whether they could label parts or define terms, then you tested for recall rather than application.
- **Did I test what I taught?**
  For example, your questions may have tested the students' understanding of surface features or procedures, while you had been lecturing on causation or relation–not so much what the names of the bones of the foot are, but how they work together when we walk.
- **Did I test for what I emphasized in class?**
  Make sure that you have asked most of the questions about the material you feel is the most important, especially if you have emphasized it in class. Avoid questions on obscure material that are weighted the same as questions on crucial material.
- **Is the material I tested for really what I wanted students to learn?**
  For example, if you wanted students to use analytical skills such as the ability to recognize patterns or draw inferences, but only used true-false questions requiring non-inferential recall, you might try writing more complex true-false or multiple-choice questions.

An additional consideration, particularly when using in-depth essays in exams, is the consideration of breadth – is your exam covering the full curriculum taught, or does it

focus too narrowly on only a few particular elements, allowing students to pass and succeed with a relatively shallow and narrow engagement with their studies?

An effective examination consistently differentiates levels of student mastery by including a mix of basic, intermediate, and difficult questions. Your examinations should contribute to your teaching strategy of building *meaningful* rather than *surface* knowledge by including an appropriate ratio of higher-level questions.

3.3 Multiple Choice Question Based Exams

3.3.1 What are MCQs

Multiple choice question exams involve questions, following which there are several answers, only 1 of which is correct. The student has to select the one statement that they believe to be the correct answer. MCQs allow staff to assess a broad range of knowledge in a relatively short period of time; it allows a test to have a much greater degree of breadth in relation to curriculum coverage compared to essay-based exams. Multiple Choice Questions allows for specific statistical approaches to marking, allows for test retest reliability, and perhaps most importantly, can be marked very quickly. Indeed, particular formats can allow for MCQ exams to be marked automatically.

Imperial College London (online) set out the the strengths andf weaknesses of MCQ approaches, noting that there are a number of good reasons to use this particular approach to assessment, as well as a number of weaknesses, which might mean that this assessment approach is not always appropriate.

Table 9: Strengths and Weaknesses of Multiple Choice Question Exams.

Strengths	Weaknesses
Easily marked, e.g. optical scanning	Very hard to set well
Good for testing factual knowledge	Less good/ not effective for higher order thinking skills, and reasoning cannot be seen
Can test a large part of a factual syllabus	Danger of guessing (single T/F type questions are particularly discouraged for this reason)
Can be run on-line, avoiding the need for paper altogether – but for summative purposes all the class needs to do at same time, unless you have a validated bank of 'equal' questions to draw on. The medium may have an impact on	Female students have been shown to be less prone to taking assessment risks than male – so they may be less likely to guess and therefore be disadvantaged vis-à-vis male students.
Once questions are developed MCQs should save time and	Danger of assessing that which is easy to assess, not that which is important to assess
Can be used formatively, including for diagnostic testing, and summatively	Can encourage a surface approach to learning

According to the University of New South Wales in Syndey, Australia (online) Multiple choice question tests are a helpful formative assessment tool that can be used to encourage students in relation to active and self-managed learning (for example, see appendix 3 for a sample MCQ developed for formative assessment purposes as part of an MA unit on research methods in education at the university of bedfordshire). They go on to state that one aspect of MCQs, that they tend to focus on relatively lower order thinking (e.g. the recollection of specific facts), can lead to arguments that they are not appropriate for use in Higher Education. In response to this they state (UNSW, online)

" You can design MCQ tests to assess higher order cognition (such as synthesis, creative thinking and problem solving), but you must draft questions with considerable skill if such tests are to be valid and reliable. This takes time and entails significant subjective judgment... Where MCQ tests are appropriate, ensure that you integrate them effectively into assessment design."

They state that MCQ questions should never be the sole form of summative assessment in any higher education courses, however they may still form a useful part of a course, where you wish to gauge whether students have a clear grasp of knowledge in a relatively diverse, knowledge-rich curriculum. One can imagine this being particularly important in some medical areas, which can depend on being able to retain and assimilate a large amount of factual information.

3.3.2 Designing MCQs

It is clear that if MCQs are to be useful, they must be well designed and written. Carnegie Mellon (online) provides the following advice for writing MCQ items:

- Write objective test questions so that there is one and only one best answer.
- Word questions clearly and simply, avoiding double negatives, idiomatic language, and absolutes such as “never” or “always.”
- Test only a single idea in each item.
- Make sure wrong answers (distractors) are plausible.
- Incorporate common student errors as distractors.
- Make sure the position of the correct answer (e.g., A, B, C, D) varies randomly from item to item.
- Include from three to five options for each item.
- Make sure the length of response items is roughly the same for each question.
- Keep the length of response items short.
- Make sure there are no grammatical clues to the correct answer (e.g., the use of “a” or “an” can tip the test-taker off to an answer beginning with a vowel or consonant).
- Format the exam so that response options are indented and in column form.
- In multiple choice questions, use positive phrasing in the stem, avoiding words like “not” and “except.” If this is unavoidable, highlight the negative words (e.g., “Which of the following is NOT an example of…?”).
- Avoid overlapping alternatives.
- Avoid using “All of the above” and “None of the above” in responses. (In the case of “All of the above,” students only need to know that two of the options are correct to answer the question. Conversely, students only need to eliminate one response to eliminate “All of the above” as an answer. Similarly, when “None of the above” is used as the correct answer choice, it tests students’ ability to detect incorrect answers, but not whether they know the correct answer.)

Another aspect to consider when designing MCQ items is the potential strategies that students may decide to use, if they do not know the answer, and how to ensure that these are not successful:

Strategy 1."Pick the longest answer." Way to defeat this strategy: make sure the longest answer is not regularly the right answer.

Strategy 2."Pick the 'b' alternative." Way to defeat this strategy: make sure each answer is used the same number of times, in random order.

Strategy 3.“Never pick an answer which uses the word 'always' or 'never' in it." Way to defeat this strategy: make sure such answers are correct with some frequency

Strategy 4."If there are two answers which express opposites, pick one or the other and ignore other alternatives." Way to defeat this strategy: sometimes offer opposites when neither is correct.

Strategy 5."Pick the scientific-sounding answer." Way to defeat this strategy: use scientific sounding jargon in wrong answers.

Strategy 6."Don't pick an answer which is too simple or obvious." Way to defeat this strategy: sometimes make the simple, obvious answer the correct one.

Strategy 7. “randomly choose answers because you have nothing to lose!”. Way to defeat this strategy: make it a negatively graded exam, whereby students lose a mark for each wrong answer they give.

3.4 Traditional Academic Essays

An academic essay typically involves a substantial piece of structured writing that involves demonstration of knowledge in a particular area, as well as the need for critical discussion and evaluation of different theories/concepts. Essays can tap complex thinking by requiring students to:

- Summarise key concepts
- organize and integrate information from multiple sources,
- interpret information,
- Compare and contrast the views of different theorists
- construct arguments,
- give explanations,
- evaluate the merit of ideas,

Essays typically are driven either by a specific set question, or based on a statement that students are asked to discuss. Essays are generally used at all levels of Higher Education. At an assessment point, students may be given one essay title, or a selection of titles to choose between.

Typically, where essays are based on a question, there is not necessarily a right or wrong answer. Brown, Bull, & Pendlebury (1997) identify the following broad types of essay question:

•Speculative (to invite the student to construct alternative realities).

•Problem-based. (e.g. how do teachers address disruptive behaviour in classrooms)

•Witty (to stimulate creative flair).

Developing this, they identify a number of ways in which essays may be introduced:

•A quotation to discuss (to stimulate examination of a perspective or challenge a view).

•An assertion (to encourage the student to examine the pros and cons).

They may be introduced by the following words:

• ‘Write on’ (students have to select from their knowledge and develop their own framework for the question).

• ‘Describe’ or ‘explain’ (to give an account and/or rationale).

• ‘Compare and contrast’ or ‘discuss (critically)’.

• ‘Evaluate’ (in practice all essays involve varying degrees of interpretation and evaluation).

• ‘Design’ (may require more in-depth work by the student).

The length of essays is worth considering carefully, as longer is not always necessarily better. Concise, brief essays can help students to focus and hone in on the most important topics, rather than “padding out” with secondary or irrelevant detail. Clearly specified word lengths are key in this – often these will be specified at university level, as there are guidelines in terms of the amount of assessment material students are expected to do per unit of study (for example, a 30 credit MA unit at the University of Bedfordshire will expect an equivalent of 4-6,000 words of work)

3.4.1 Advantages and Disadvantages of Essays

The University of Ulster (online) identifies a number of advantages and disadvantages to the use of essays as a method of assessment

- They are flexible and allow for individuality and creativity for students to develop and demonstrate their own unique perspectives on a subject.
- Essays allow for greater depth in terms of reading and writing compared to other forms of assessment; this means that students who engage more with their reading, and engage with independent work, can be rewarded for this work.

  The main disadvantages linked to the use of essays are:

- The amount of time it takes to prepare and write an essay, which can impact on teaching and the curriculum used in a program
- The amount of time it takes to mark an essay
- There is something of an art to essay writing, meaning that this form of assessment can favour those who are good at essay writing, rather than those who have a good critical understanding of the subject area

Perhaps the main disadvantage that needs to be highlighted however the possibility of plagiarism occurring with this type of assessment is. Plagiarism involves the unattributed use of the work of others – either unwittingly through a failure to reference or paraphrase properly, or through activities such as buying essays online from companies who specialise in this area.

Plagiarism of this nature is unfortunately an increasingly common issue for universities, and it has necessitated the use of online processes such as Turnitin. Turnitin is a key part of every university's Virtual Learning Environment, as it is expected that student work, submitted electronically, should be put through Turnitin.

Turnitin performs a similarity check, which compares individual pieces of work against other material available online, and previous assessments that have been submitted to Turnitin, across all the institutions it is used in. It is a potentially powerful tool that students should be made aware of, to ensure that they are aware of the consequences that follow from a failure to conform to standard academic writing conventions.

Academics are also encouraged to minimise the opportunities for students to plagiarise, by regularly changing the titles of the essays they set, and importantly, by personalising them to particular contexts, to minimise the opportunity for them to plagiarise by using generic material they might find online or elsewhere.

3.4.2 Alternatives to essays

The University of Ulster (Online) highlight the following as possible alternative approaches to traditional academic essays:

- Write an article targeted for inclusion in a serious newspaper.
- Write an article targeted for inclusion in a professional magazine.
- Write an article targeted for inclusion in a popular newspaper (i.e. encourage students to target work towards a particular audience).

- Write a Book review.

These alternatives can encourage students to develop writing skills in different genres, taking into account the medium, and the expected audience.

3.5 Oral Assignments & Presentations

Oral assignments and presentations rest on a very different set of skills compared to formal written assessments. They rely on strong communication skills, which are considered important transferable skills in many modern occupations. In this sense, oral presentations provide students with a very helpful opportunity to develop skills which they will be expected to competently display in future workplaces – particularly for teachers.

Oral assessments are a key part of assessment in a number of disciplines, for example:

- Law students participating in mock trials or cases
- Nursing students, who are expected to take part in OSCEs (Objective Structured Clinical Examinations) which are an important aspect of this role

Oral presentations, particularly when there audience participation is allowed gives an important opportunity for students to continue to develop and have active learning opportunities, where rich formative feedback opportunities are available.

Joughin (online) sets out seven reasons for using oral assessments and presentations:

1. The learning outcomes demand it

2. It allows probing of the students' knowledge

3. It reflects the world of practice

4. It improves learning

5. It suits some students

6. The meaning of questions can be clarified

7. It helps to ensure academic integrity

Academic Integrity is an interesting point, as it is noted that plagiarism is much less of an issue when it comes to presenting orally, compared to written assessments.

3.5.1 Advantages & disadvantages of Oral Assessments

A number of benefits and challenges associated with the use of oral assessments have been identified by both the University of Ulster (online) and Joughin(online):

- The opportunity for plagiarism is substantially reduced, compared to written assessments
- By and large, students take presentations seriously, and prepare for them well, as it is a form of public performance, in front of both staff and their peers
- It can assess a range of often transferable communication skills, including oral communication, the use of structured materials, use of technology (e.g. powerpoint)
- Students can be awarded for a wider range of skills than just academic writing
- It can help students develop their confidence
- Presentations allow for a greater opportunity to gain formative feedback, from academics and from peers.

Disadvantages identified include:

- The time taken up by presentation – if a large number of students are presenting, this can take up a lot of time, and will likely cut into teaching time.
- If a large number of students are presenting, students may only be given short time slots, which may not be long enough to present complex information, and may detract from opportunities for formative feedback.
- Oral presentations may produce very high levels of stress and anxiety in students. This can in turn produce “stage fright”, where student performance does not reflect their actual skills and knowledge.
- This form of assessment can never be anonymised, which could impact on the ability of academics to objectively assess their work, free of bias.
- Ideally, presentations should be seen and marked by more than one academic. Having 2 academics attending and assessing presentations can become very time consuming.
- Articulateness in expressing ideas may be mistaken for being knowledgeable.
- Where presentations rely on technology, when they break down (e.g. computers breaking down, projectors failing), the entire assessment may not be possible.
- Presentations may not develop communication skills if students simply artificially perform, reading direct from a script or a powerpoint slide.

3.5.2 Preparing for Oral Presentations

When planning for oral presentations, Joughin (online) highlights the following six dimensions that need to be taken into account:

1. What is being assessed: are we looking at information, are we asking them to discuss potential solutions for problems? Are we looking at their communicative competence – is it the message, or how it is transmitted?
2. Interaction: are we actively expecting students to engage with the audience, to ask them questions, and more importantly, to answer questions?
3. Authenticity: does it feel real – are they talking to a real audience who would have an interest in the topic, or who would normally be covering the material being taught?
4. Structure: how much structure is there for students, in terms of time, expectations of the use of powerpoint (e.g. is there some prescription in terms of the number of slides to be used, or the format they should follow?)
5. Who assesses?: what is the academic's perspective on the academic content and the performative element of the oral assessment?
6. Purely oral or a combination of modes? Is the focus only on the oral component, or are powerpoint slides also a key part of what is assessed?

Key points for academics to consider when preparing students for oral presentations include:

- Provide clear written information about the assessment and spend time discussing this in class.
- Provide opportunities for practice in class time. For example, if the assessment is based on group presentations, build short presentation activities with time for discussion and feedback into regular class time.
- If the assessment is carried out in front of peers, use peer evaluation and feedback to help students become familiar with criteria and standards.

- Take time to debrief students following the assessment. Verbal feedback and the opportunity to discuss what went well and where improvement could be made will help students in similar future assessments.
- Students are often not experienced in expressing themselves orally within their chosen discipline. Build in opportunities for speaking in class, in different informal and semi-formal ways. Use in-class strategies that require all students to speak frequently, including short talks.

3.7 Group Work

Group work is another modern approach to the assessment of students. While it is often an informal strategy in order to encourage discussion within seminar sessions, it is increasingly seen as a formal approach for assessment purposes. The co-operative nature of the assessment, the opportunity to continue to develop interpersonal skills are seen as important characteristics to nurture in students. Carefully planned group work provides an opportunity for students to develop and nurture these important skills. In addition to this,group work provides the opportunity for active learning between students, rather than simply having teacher-led sessions, are key aspects of this approach to assessment. Group work focused assessments allow for cooperative learning, collective learning, peer learning, reciprocal learning, or team learning.

Reasons why group work is increasingly popular include:

- It develops skills around interpersonal communication and working as a team that are popular with employers.
- It is reported that students enjoy courses that involve group work
- The group dynamic, and the manpower can allow groups to produce more substantial and complex assignments than an individual could do on their own.
- Group work fits well with problem solving focused courses

The University of Wellington in Victoria, New Zealand (online) note that group work as a method for assessment may be appropriate in the following circumstances:

•When learning outcomes are best achieved through students working in groups.

•Where the aim is to teach students collaborative, cooperative and team-working skills.

• When the task can only be carried out by a group (e.g., where students work as a management team, or are required to assign specific roles to group members).

•When the task is too large or complex for one person.

•When group skills are precisely those required for employment or research.

•When students are required to think creatively and originally, to listen to others' ideas sympathetically and critically, and to build on others' work.

•When resource limitations justify group work (e.g., equipment, time, project duration, limited number of 'real' clients).

Group work may be done through a number of formats:

- Group Oral Presentation
- Group Poster Presentation
- Group Report
- Individual report (e.g. where the group work together as a whole, but individuals are responsibly for submitting their own report separately)

3.7.1 Group formation and composition

As an academic involved in teaching on a course that involves formal group work assessments, a key consideration is how groups are formed – do students get to freely choose which group they want to work in? Are there clear limits in the number of students who are allowed to be in a single group? This all needs to be considered in relation to the duration of the group project – whether it be a relatively short duration of a week or two, across a whole semester, or in some cases over an entire academic year.

By and large, it would be expected that in the presence of clear guidance and criteria, group work should run smoothly. However, when considering selection and composition of groups, issues can arise. The University of Reading (online) notes that while allowing students to select and form groups themselves might seem reasonable, unfortunately this can backfire, for example if by selection the most able students work together, leaving weaker students to form their own groups. However, allocating groups yourself can have its own problems, depending on the nature and characteristics of the individuals in the group. One of the key issues to consider when thinking about group size and allocation is "free loading" – students who are a part of a group, but who do not actively participate or engage, leaving all the work to the rest of the group. The polar opposite – one person taking charge, and taking on all the work themselves, is also possible, though does not arise so much in commentary on group work.

The University of Reading (online) provide the following guidance on how to deal with freeloaders:

- reduce the extent to which you rely on group marks;
- ask groups to keep formal minutes of their meetings, which must then be signed off by a member of staff;
- assess group work outcomes on an individual basis (e.g. formative assessment of group product(s) with a separate individually-assessed component);
- divide the group work into individually-assessed component tasks (though this may not always be practical);
- moderate the group mark on the basis of knowledge about individuals' contributions;
- make use of students' assessment of peers in the group work process;
- agree a series of consequences for freeloading in advance of the group starting work, for example, if students fail to complete agreed tasks on time or don't turn up to group meetings etc. These can be imposed whilst the group is still working to allow the freeloaders an opportunity to change their ways and satisfactorily deliver their part of the task.

Most groups can work quite well with minimal intervention, if clear frameworks and criteria have been established. However, careful management of the groups is vital, particularly at the commencement of the study. The groups will need time and support to ‘form’ or come together’. Tuckman’s (1965) description of the stages of group work is worth considering here:

• Forming – The group comes together and gets to initially know one another and form as a group.

• Storming – A potentially difficult period when roles are developed, leadership is contested and there is a trialling of group processes.

• Norming - A consensus is reached on how the group operates.

• Performing - The group become effective and almost selfmanaging and works to meet its shared objectives.

3.7.2 Assessing group work

When assessing group work, it is important to consider what the main focus for assessment is – is there a focus on the process, making peer feedback and minutes from meetings important, or is the focus only on the final produce produced by the group (e.g. the presentation, report, etc..). Often it may be a combination of both. Key decisions to be made when deciding how to assess group work are:

1. whether a single mark will be given to an entire group
2. whether peer feedback and assessment will contribute to the grade

Giving a single mark to an entire group is a simple solution, and certainly reduces the workload for the academic. However, due to the freeloader issues discussed previously, a number of complex alternatives for marking and recognising individual contributions within a group have been used:

- All students get separate tasks within a group project, which are assessed separately.
- Students get a general grade for the single piece of group work, that accounts for a certain percentage of the grade, but then have to do additional work for the rest of the grade.
- All students get the same mark for the product of the group, and then peers assess contributions to process out of an additional 10 marks
- All get the same group mark for the product, and then get individual marks for performance in a group viva.
- All get the same mark for the original task, but differentiation is achieved in an exam task based on the group work.

These potentially complex additional task add to the workload of both the student and the academic. However, as the University of Reading (online) note

'Allocating a single group mark to all members of a group rarely leads to appropriate student learning behaviour, frequently leads to free loading, and so the potential

learning benefits of group work are likely to be lost, and in addition students may, quite reasonably, perceive their marks as unfair.'

Whichever option is selected, it is important that students be informed and aware of this from the outset of the group work assignment.

3.7.3 Advantages and disadvantages of group work assessments

As with all other approaches to assessment, there are a range of advantages and disadvantages to group work. Major advantages include:

- Students enjoy the active nature of the work, which they can influence
- Good social opportunity to get to know peers better, and can reduce isolation in a particular cohort
- Students enjoy the opportunities for interaction with peers, and the opportunity to learn from their views and experience
- Can help to develop problem solving skills
- Group work encourages questioning, discussion, and can support the development of motivation in relation to the topic
- Can support the development of interpersonal, collaboration, and communication skills
- It can enhance student satisfaction of their learning experience and can nurture and promote self-esteem

Disadvantages include

- Group work is not always favoured by all students
- The group process being derailed by dominant individuals or freeloaders, leading to conflict, and potentially isolation or marginalisation
- Social difficulties arising during the group process – people being unwilling to talk or contribute, timidity, etc.
- Intercultural issues can have unexpected impacts on group dynamics

- As seen above, setting out a far and appropriate way of assessing individuals within a group can prove challenging, and students may grow resentful of other students being awarded for work they have not done
- Substantial additional work may be required for the academics to support and nurture the group process
- Students who are not familiar with group work as an approach to assessment may become anxious or stressed.
- Students may over-focus on their individual specific tasks within the group to the detriment of the ‘group’ goal.

3.8 Observation

Observation is a relatively infrequently used assessment method in a higher education setting. However, for trainee teachers, it is frequently a crucial component of their assessment, which focuses in particular on their developing competence as a teacher in the classroom. For teacher trainees, observations can be a progressive developmental process over time, as they adjust to the classroom; the fact that students will typically be observed on multiple occasions. This can ensure that a supportive and constructive relationship is developed between the student and the academic observing them. The support and encouragement of the academic, highlighting good practice, and areas which can be improved, can be crucial. The feedback which they provide, which should be prompt and, hopefully, positive, is seen as a crucial element in the whole observation process.

Some students may need and request specific support and this is where the observer is able to be very effective in helping out and suggesting various strategies that could be used to overcome any particular challenges. The observation form used by staff at the University of Bedfordshire (see appendix 4) is a good example of this, as its format encourages the observer to suggest additional strategies and points to consider where necessary.

An important aspect of the observation form is that it is an important opportunity for formative feedback, as the form is filled out and then discussed with the trainee. This observation form, along with reflection and responses, can be added to the portfolio of evidence that a student provides in UK teacher training courses.

In-person observations are characteristically:

- Responsive to classroom dynamics;
- Relatively obtrusive;
- Subjective and transitory;
- Context-aware;
- Effective for prompt and positive feedback;
- Good for tutor-trainee rapport and maintaining relationships;

3.9 Portfolios

3.9.1 What is a portfolio?

Historically, the term portfolio has been used to describe a folder of work used predominantly for skill recording and display purposes. Its use has more commonly been linked to arts-based courses. However, more recently the term has been taken up for use in schools and colleges, describing a more modest, but still systematic, folder holding work from a particular project or an entire course, and in professional fields as a collection of material required to evidence competence for accreditation or to prepare for assessment.

The primary motive of a portfolio is to support student learning by providing a structure for reflecting systematically over time on the learning process and to develop the aptitudes, skills and habits that come from critical reflection. Students look at work they have produced, ideally in a practical context, and comment on their strengths and weaknesses. The portfolio includes evidence of the relevant activities the students have engaged in, any feedback they have received on these, alongside their own reflections.

Portfolios require students to be active participants in learning; thinking creatively, exploring different solutions, critically reflecting on both strengths and weaknesses in relation to their current level of knowledge and performance.

Two sets of distinctions can be made when classifying portfolios:

1. Developmental Portfolios vs Showcase Portfolios: A showcase portfolio would typically capture only finished work. A developmental portfolio however shows evidence of reflection and development, showing “work in progress”. The developmental portfolio emphasizes the process of learning. As such, this type of portfolio should be dynamic, changing across the course of the programme.
2. Paper vs e-portfolios: Modern technology, and online systems such as pebblepads mean that folders of evidence can be created electronically.

A portfolio is very flexible and has many possible uses, including:

- storing materials
- sharing materials with an outside audience (particularly when using electronic versions)

- aiding self analysis
- supporting academic and profession goals
- supporting external assessment

3.9.2 What goes in a portfolio?

According to the Open University (online), a range of different types of direct and indirect sources of evidence can be included within a portfolio, to demonstrate student learning.

Direct evidence can include:

- Observation forms filled out by an academic (See section 3.8)
- Projects or work based assignments (across a whole qualification, it can include previous assignments within courses)
- Personal reports
- Lesson plans, teaching materials created for lessons being taught
- In relation to teacher training, examples of work produced by pupils being taught may be useful as evidence
- Evidence of correspondence (e.g. minutes of meetings with mentors)

Indirect evidence can include:

- Witness testimonies provided by others, such as teachers
- Achievement in related areas
- Attendance on courses/training activities

Within developmental portfolios, it is important to have evidence to support claims being made. However, reflection and commentary on how knowledge and skills have been developed is also essential. It is often specifically expected that substantial unique reflective commentary is included, either in a discrete section of a portfolio, or throughout, to demonstrate unquestionable how the portfolio provides evidence of how you have met the learning outcomes against which the portfolio is aligned.

In England, Qualified Teacher Status a common part of the award is a portfolio of evidence, demonstrating how trainees have developed to meet the 8 teacher standards set out by government. The portfolios used in this area commonly link to these standards, and portfolios are carefully set out to ensure that they will include evidence linked to these standards (see appendix 5 for an example of what is expected in teacher trainee portfolios at the University of Bedfordshire).

3.9.3 Advantages and Disadvantages of Portfolios

There are a range of positive and negative aspects related to the use of portfolios. The main advantages are:

- The reflective aspect of the portfolio encourages students to critically engage with their own learning
- Gives students a feeling of ownership over their learning
- Encourages the philosophy of lifelong learning and continuous professional development
- It encourages the development and evidence of skills not normally associated with conventional written assessments or exams.
- The portfolio fits very well with particular modern qualifications, particularly teacher training – it is commonly used in the UK teacher training courses, both primary, secondary, and even higher education teaching qualifications.
- Allows for the use of a broad range of types of evidence
- The flexibility of the format supports individual students to address issues relevant to their own context.
- Eportfolios are easily sharable and accessible, allowing for multimedia components to be included (e.g. audio recordings, videos, etc.)

The main disadvantages of using portfolios are:

- Technological issues when using e-portfolios, relating to stability of platform, usability of platform, loss of materials, incompatibility with different file types
- This approach to assessment is dependent on student engagement with their learning outside of formal sessions; motivating students to engage with this may be problematic
- The amount of time required to assist and assess what are frequently substantial files/folders

- The holistic nature of the assessment, and the multiple components that make up a portfolio can make it difficult to mark
- The requirements of the portfolio as an assessment approach may directly impinge on the curriculum, with an increased focus on the assessment rather than the material that needs to be covered.
- Portfolios work best when there is clear direction for students on what to include within a portfolio. However, if this is too prescriptive, the portfolio may devolve into a mere box-ticking exercise.
- Honesty; students may presume a need to set out positive experiences, rather than set out difficulties they have had, and how they could learn from them

- When portfolios are used for accountability purposes, to document preservice teachers' achievement of standards-based competencies, teacher candidates viewed their portfolios as a hoop they needed to jump through to graduate, and not the lifelong reflective tool that had been envisioned.

3.9.4 Questions to consider before using a portfolio

The University of Hawaii (online) set out a range of questions that academics should consider before implementing a portfolio for assessment purposes:

- What is the purpose of the portfolio requirement? To document student learning? Demonstrate student development? Learn about students' reflections on their learning? Create a document useful to students? Help students grow through personal reflection on their personal goals?
- When and how will students be told about the requirement, including what materials they need to collect or to produce for it?
- What are the minimum and maximum lengths or sizes for portfolios?
- Who will decide which materials will be included in portfolios- -faculty or students?
- What elements will be required in the portfolio- -evidence only from courses in the discipline, other types of evidence, evidence directly tied to learning outcomes, previously graded products or clean copies?
- Will students be graded on the portfolios? If so, how and by whom?
- How will the portfolios be assessed to evaluate and improve the program?
- What will motivate students to take the portfolio requirement seriously?
- How will the portfolio be submitted–hard copy or electronic copy?
- Who "owns" the portfolios–students or the program/university? If the program/university owns them, how long will the portfolios be retained after the students graduate?
- Who has access to the portfolios and for what purposes?
- How will student privacy and confidentiality be protected?

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Appendices

Appendix 1. Checklist for writing Learning Outcomes

Checklist for Writing Intended Student Learning Outcomes Statements

The following table provides a checklist for academic business units to use in writing clear and effective statements of intended student learning outcomes for their business programs.

	Checklist for Writing Intended Student Learning Outcomes
☐	The statements specify the level, criteria, or standards for the knowledge, skills, abilities, or competencies that students are expected to be able to demonstrate.
☐	The statements include conditions under which students should be able to demonstrate their knowledge, skills, abilities, or competencies.
☐	The statements are written using active verbs that specify definite, observable behaviors or performance levels.
☐	The statements are measurable.
☐	The intended student learning outcomes are distinct and specific to the business programs.
☐	The intended student learning outcomes are aligned with the academic business unit's mission and broad-based student learning goals.
☐	The statements specify (i) the areas/fields that will be the focus of assessment, (ii) the knowledge, skills, abilities, and competencies that students are expected to acquire in those areas/fields upon completion of their programs of study, (iii) the depth of the knowledge, skills, abilities, and competencies that students are expected to demonstrate.
☐	The intended student learning outcomes are expressed in terms of the overall program and not individual courses.
☐	The statements are simple declarative statements that are capable of being assessed by a single assessment method, i.e., they are expressed in ways that do not combine multiple intended outcomes into a single statement requiring the use of multiple assessment methods.
☐	The statements are expressed in ways that make them capable of being assessed by more than one assessment tool, instrument, or metric.
☐	The statements are expressed from the students' perspective and not in terms of what the academic business unit will do, will provide, or intends to accomplish.
☐	It is possible to collect accurate and reliable assessment data for each intended learning outcome.
☐	The statements can be used to identify areas for changes and improvements.
☐	Considered together, the intended student learning outcomes accurately reflect the key desired learning results for each of the academic business unit's programs.

For any checkbox that remains unchecked in the list above, you will need to review your intended student learning outcomes and revise them accordingly before submitting your outcomes assessment plan to the IACBE.

Appendix 2. Sample Rubrics for Masters Dissertations

1. Blackpool and Fylde College

Dissertation Assessment Criteria – Marking Sheet

Student Name: ..... **Year:**	**Total Mark:**	**Date:**
Dissertation Title: ..... **Marker:** ..... **First Marker / Supervisor:**.....	**Mark Agreed:**	**Date & Initials:**

The assessment criteria for the Dissertation embraces four areas of the work which are differently weighted as follows:

Area One:	**Task Definition and Methodology (15% of Total Marks)**
Area Two:	**Literature Review and Conceptual Framework (30% of Total Marks)**
Area Three:	**Data Collection, Analysis, Findings and Conclusions (45% of Total Marks)**
Area Four:	**Presentation and Communication of Ideas (10% of Total Marks)**

General Comments:

Task Definition and Methodology: (15%):	
• Subject valid and relevant; • Clear statement of the research problem/question, and associated objectives, with a comprehensive and persuasive rationale; • Appropriate selection of, and justification for, the methodology adopted, indicating a full understanding of its values and limitations.	(70%+ First Class) (mark between: 10.5 and 15)
• Subject valid and relevant; • Clear statement of the research problem/question, and associated objectives, with an appropriate rationale; • Appropriate selection of, and justification for, the methodology adopted, indicating a sound understanding of its values and limitations.	(60-69% Upper Second) (mark between: 9 and 10)
• Subject valid and relevant; • Statement of the research problem/question reasonably clear, but some shortcomings in clarity of purpose and associated objectives; • Rationale included, but somewhat lacking in clarity and relevance: • Appropriate selection of, and some justification for, the methodology adopted, with evidence of an understanding of its value and limitations.	(50-59% Lower Second) (mark between: 7.5 and 8.5)
• Subject has some validity and relevance; • Unclear statement of the research problem/question, and associated objectives; • Rationale present but of marginal relevance; • Poor selection of, and justification for, the methodology adopted, with no clear evidence of an understanding of its value and limitations.	(40-49% Third Class) (mark between: 6 and 7) or (35-39% Unclassified) (mark between: 5.5 and 6.5)
• Subject is largely invalid with little or no relevance; • No identifiable statement of the research problem/question and associated objectives; • No rationale, or one which is inappropriate/irrelevant; • No clear application of any distinct and appropriate methodology, with no evidence of any real understanding of the methodological foundations of the work.	(Below 35% Fail) (mark between: 0 and 5)
Marker's Additional Comments	**Mark Proposed**

Literature Review and Conceptual Framework (30%):	
• Evidence of a comprehensive knowledge and full critical review of the literature relevant to the study; • Development of a coherent, and fully justified conceptual framework to underpin the research undertaken.	(70%+ First Class) (mark between: 21 and 30)
• Evidence of a sound knowledge and critical review of the literature relevant to the study; • Development of a clear, appropriate and justified conceptual framework to base the research upon.	(60-69% Upper Second) (mark between: 18 and 20.5)
• Evidence of a satisfactory knowledge and limited critical review of the relevant literature, but with obvious gaps and omissions; • Development of an appropriate conceptual framework, but which is not clearly stated and/or complete and justified.	(50-59% Lower Second) (mark between: 15 and 17.5)
• Evidence of only a limited knowledge of the literature, with little or no critical comment; • Some evidence of an attempt to develop a conceptual framework, but which is characterised by confused thinking, gaps and omissions, and not justified.	(40-49% Third Class) (mark between: 12 and 14.5) or (35-39% Unclassified) (mark between: 10.5 and 11.5)
• No convincing evidence of an understanding of the literature, with a very limited selection of relevant sources and no critical comment; • No development of an appropriate conceptual framework for the research.	(Below 35% Fail) (mark between: 0 and 10)
Marker's Additional Comments	**Mark Proposed**

Data Collection, Analysis, Findings and Conclusions. (45%):	
• Entirely appropriate selection and implementation of data collection methods which is fully justified and recognises the limitations of the methods adopted; • Clear and extensive evidence of a high level of analysis using appropriate techniques; • Clear presentation of fully justified findings and logical conclusions, based upon the research evidence, which demonstrate the ability to critically evaluate the research results.	(70%+ First Class) (mark between: 31.5 and 45)
• Appropriate selection and implementation of data collection methods which is justified and provides evidence of a recognition of the main limitations of the methods adopted; • Clear evidence of a high level of analysis using appropriate techniques; • Clear presentation of justified findings and logical conclusions, predominantly based on research evidence, which contain evidence of the ability to critically evaluate the research results.	(60-69% Upper Second) (mark between: 27 and 31)
• Mainly appropriate selection and implementation of data collection methods with evidence of justification and some recognition of the limitations of the methods adopted; • Evidence of a satisfactory level of analysis using appropriate techniques; • Clear presentation of findings and conclusions, related to the research evidence, with reasonable evidence of appropriate justification for, critical comment on, and logical development in these areas.	(50-59% Lower Second) (mark between: 22.5 and 26.5)
• Generally an inappropriate selection and implementation of data collection methods, with little evidence of an appreciation of the limitations of the methods adopted; • Evidence of appropriate analysis, but which is limited and/or logically inconsistent; • Presentation of findings and conclusions which are not entirely based on the research evidence, and which may be unsupported by either the evidence or logical reasoning, or both; • Little or no evidence of the ability to critically evaluate the work undertaken.	(40-49% Third Class) (mark between: 18 and 22) or (35-39% Unclassified) (mark between: 15.5 and 17.5)
• An inappropriate selection and implementation (or absence) of data collection methods, with no evidence of an appreciation of the use of such methods; • Little or no evidence of appropriate analysis and/or extensive logical inconsistency; • Presentation of some findings and conclusions, but which are either inaccurate, incomplete, and/or illogical.	(Below 35% Fail) (mark between: 0 and 15)
Marker's Additional Comments	**Mark Proposed**

Presentation and Communication of Ideas. (10%):	
• Conforms to all the required specifications and has an excellent layout in terms of structure and logical argument; • Clear and correct use of English characterised by a very lucid style of expression, with no imprecise and/or incorrect statements; • Appropriate and innovative use of presentation methods.	(70%+ First Class) (mark between: 7 and 10)
• Conforms to all the required specifications and has a very good layout in terms of structure and logical argument; • Clear and correct use of English characterised by a clear style of expression, with few imprecise and/or incorrect statements; • Appropriate use of presentation methods.	(60-69% Upper Second) (mark between: 6 and 6.5)
• Conforms to all major specifications and has generally good layout in terms of structure and logical argument; • Reasonably clear and correct use of English characterised by generally clear expression, with relatively few imprecise and/or incorrect statements; • Mainly appropriate us of presentation methods.	(50-59% Lower Second) (mark between: 5 and 5.5)
• Does not conform to a significant number of the required specifications, but has a generally acceptable layout in terms of structure and logical argument, though the latter may not be a good as desired; • Generally correct use of English, but with aspects of unclear expression and a number of imprecise an/or incorrect statements; • Presentation adequate, but with clear deficiencies.	(40-49% Third Class) (mark between: 4 and 5) or (35-39% Unclassified) (mark between: 3.5 and 3.5)
• Does not conform to the required specifications and has generally unacceptable layout in terms of structure and logical argument; • Generally poor use of English characterised by numerous errors, unclear, incorrect and/or illogical statements; • Presentation inadequate, with numerous deficiencies.	(Below 35% Fail) (mark between: 0 and 3)
Marker's Additional Comments	**Mark Proposed**

2. University of Gloucestershire

Table 1. Assessment criteria and weighting for each section of the dissertation

Section	Questions	Weighting
Abstract	Does it fit on one side of A4? (11 point font, 1.5 line spacing) Is the purpose of the study clearly stated? Is the design of the study clearly outlined? Are the essential details of the procedures and equipment provided? Have the important data been presented? Has the necessary statistical information been presented? Have the appropriate scientific conventions been adopted? **Can the conclusions be justified on the basis of the information provided?**	5%
Introduction	Does it indicate the general significance of the topic as an area of study? Does it identify the contribution that this particular study will make to the area? Does it comment on the implications of the possible outcomes? Is the key literature introduced? Does it progress smoothly and logically from the general to the specific? **Does it allow the reader to place the study in an appropriate context?** **Is (are) the aim(s) of the study appropriate?**	10%
Review of literature	Is the range of material covered appropriate in terms of the age of the work? Is the range of material covered appropriate in terms of relevance? Does the author make appropriate use of references to support the main points? Is there an emphasis on primary (as opposed to secondary) references? Are sources such as textbooks and magazines used only when necessary? Is the structure appropriate? **Does the review progress smoothly & logically, using the literature to tell a story?** **Is there evidence of an appropriate level of critical evaluation?**	20%
Methods	Is the information arranged in a logical order, with all the important points covered? Would the information provided allow the reader to repeat the study? Does the author appear to be sufficiently aware of the limitations of the study? Are the data collection procedures appropriate? Are the procedures for the recruitment of participants appropriate? Are the data analysis procedures appropriate? **Is the design of the study appropriate?** **Is the rationale for the adoption of particular procedures/approaches made clear?**	15%
Results	Are only relevant data presented? Are the data presented in an appropriate format? Has unnecessary duplication been avoided? Have tables and figures been used effectively? Has statistical information been presented in an appropriate manner? Have the appropriate conventions been adopted? **Does the section progress smoothly & logically, using the data to tell a story?**	20%
Discussion	Have the most important findings been identified? Have the findings been related to an appropriate selection of previous research? Is the discussion informed by an awareness of the limitations and delimitations? Have the implications that the findings might have been considered? Are the statistical data interpreted in an appropriate way? Is there sufficient and appropriate cross-referencing to the Results section? Does the section progress smoothly and logically? **Are appropriate explanations and interpretations of the findings provided?**	25%
Conclusions	Are the conclusions linked to the aims of the study? Are the recommendations for further research realistic? Are the important implications for current or future practice identified? **Can the conclusions be justified on the basis of the information provided?**	5%
Overall Impression	Are there an acceptably small number of spelling mistakes? Are there an acceptably small number of typographical errors? Are there an acceptably small number of problems with grammar & punctuation? Are there an acceptably small number of problems with English usage? Is the dissertation written in an appropriate style? Is it appropriately formatted? Are all the necessary preliminary sections present and are they accurate? **Is the general standard of presentation sufficiently high?**	Up to 10% deducted

Note

- If the information itself, or the clarity with which it is presented, is insufficient for us to be able to answer a particular question, we will respond as though the answer were 'No'.

3. University of Gloucestershire (second example)

Abstract A succinct statement outlining the topic, describing the methodology and summarising the results.	Part statement	Most points covered in adequate detail	All points adequately covered	A comprehensive statement that is within the word limit
Introduction What you are going to do and why. The dissertation is placed in the wider context. Objectives are stated. Research question is stated.	Objectives mentioned but not clearly stated and not put in context.	Clear statement of objectives and context	Clear statement of objectives with rationale	Clear statement of objectives with comprehensive and persuasive rationale
Literature Review Summary of findings from previous research, including a discussion of omissions and contradictions. /The scope , breadth and relevance of these findings, the development of a rationale for the conceptual framework to underpin the work	Evidence of a limited knowledge of the relevant literature	Evidence of a satisfactory knowledge of the literature	Evidence of a comprehensive knowledge of the literature with a rationale for inclusion	Evidence of a comprehensive understanding of the relevant literature and a convincing rationale for inclusion
Methodology and Methods Specify the methodology and the process for the research with justification for choice. Evidence of coherence and rigour, appropriateness of methods of data collection and clear evidence of effective organising and sequencing of work.	Evidence of some use of methodology	Evidence of some understanding of methodologies used and how they are relevant to the situation	Evidence of a sound understanding of the possibilities and limitations of the methodology being used	Evidence of a full knowledge and awareness of the possibilities and limitations of the methodologies being used
Results The relevance of the investigation and the appropriateness of the data collected. The standard of presentation of the data and an appreciation of the limitations of the data. An ability to discover, understand and analyse	Information of little relevance to the research question. Some evidence of analysis to back up ideas but the criteria not stated	Relevant information unprocessed Evidence of a satisfactory level of analysis and judgement including a statement of the criteria	Relevant information clearly presented Evidence of a sound level of analysis and judgement including a statement of the criteria	Relevant information systematically obtained, well displayed and with a realistic appreciation of its limitations Evidence of a high level of analysis which thoroughly explores the topic resulting in judgement based on evidence
Discussion of Results How the data integrates with, and questions, the issues raised in the literature. How the primary data relates to the literature. Where appropriate, justification for the choice of statistical techniques employed. An ability to bring together information and ideas and to evaluate them. There is an integration with issues raised in the literature	Evidence of ability to collate information from a variety of sources and construct linkages but with limited comment on the evidence or opinion	Evidence of ability to collate information from a variety of sources and construct meanings from it commenting on the weight of evidence and opinions	Evidence of ability to collate information from a variety of sources and synthesis it for new applications	As for (2:1) plus an ability to perceive a novel relationship
Conclusions Presents overall findings from the analysis if the data. The conclusions and recommendations of flow from the analysis. The recommendations are relevant and clear. There is a critical evaluation of the application of the findings	Limited evidence of possible transfer of knowledge from study to new situations	Evidence of possible transfer of knowledge from study to new situations	Evidence of emphasis on initial objectives and the weighting of these in forming a judgement about the transfer of knowledge from the study to new situations	As for (2:1) but more incisive
Creativity, Originality, and Reflection Ability to form a personal position on the subject by linking and combining different elements. There is reflection on the processes adopted and further implication and developments as a result of the study.	Evidence of preparedness to state a position on an issue but limited use of supporting evidence	Evidence of ability to state, on the basis of evidence, a personal position on an issue	Evidence of ability to state and defend on the basis of evidence a personal position on an issue	As for (2:1) plus more flair and imagination
Coherence Clarity of argument with supporting evidence. The validity of the study as a working document.	Evidence of selection of mainly relevant material but with the argument not presented in a coherent form	Evidence of a selection of appropriate material with a logical structure and coherent argument	Clear evidence of a selection of appropriate material with a logical structure and coherent argument	As for (2:1) but commendably lucid
Format and Language The layout is as specified in the regulations with appropriate use of language, spelling, grammar, diagrams, tables, references, and appendices.	Correct English usage with some imprecise statements	Correct English usage with precise statements and within the word target	Clear and correct English usage, correctly formatted, with few precise statement and within the word target	As for (2:1) but with more precision

4. University of Hertfordshire

6 Assessment criteria

	Clarity of dissertation purpose and objectives	**Research and referencing**	**Critical understanding of relevant theory**
70% + (A)	Clear and fully achieved.	Extensive and up to date research reflected in the text. Accurate citations and referencing	Full elaboration of concepts, theory or models. Well synthesised and critically evaluated
60%-70% (B)	Clear and achieved.	Good and up to date research reflected in text. Good citation and referencing.	Understanding and discussion of concepts, theory or models. Well synthesised. Some evidence of critical evaluation.
50%-60% (C)	Clear and achieved to some extent.	Adequate research reasonably reflected in text. Satisfactory citations and referencing.	Some identification of concepts, theory or models. Some attempt to synthesize material. Lack of critical evaluation.
40%-50% (D)	Unclearly defined or defined but not met.	Limited research not fully reflected in text. Citations and referencing not fully accurate.	Superficial and limited understanding of theory, concepts or models. No attempt at synthesis or critical evaluation.
35%-40% (E)	Poorly defined or defined but not met.	Inadequate research poorly reflected in text. Inaccurate citations and referencing.	Very limited understanding of relevant theory, concepts or models. Lacking in synthesis and critical evaluation.
FAIL	No attempt at definition.	Inadequate research not reflected in text. Citation and references missing and confused.	No understanding of relevant theory, concepts or models. Completely lacking in synthesis and critical evaluation.

Sample Dissertation Assessment Criteria from University of Hertfordshire

	Analysis of field work, research, topic	**Structure and coherence**	**Management of project**
70% + (A)	Rigorous and creative analysis of topic/ field work. Ability to link theory and empirical data and generate pertinent and insightful conclusions	Excellent presentation and organisation of material. Clear and lucid writing. Accurate grammar, spelling and punctuation.	Deadlines full met. Evidence of development between different stages of the project.
60%-70% (B)	Very good analysis of topic/fieldwork/data. Good linkages between theory and empirical data. Sound conclusions showing some reflection on topic.	Very good presentation and organisation of material. Clear writing. Good standard of grammar, spelling and punctuation.	Deadlines fully met. Evidence of development between different stages of the project.
50%-60% (C)	Satisfactory attempt to analyse topic/ field work/data. Reasonable linkages between theory and empirical data. Generation of conclusions.	Generally well presented and organised. Clarity of writing satisfactory. Acceptable standard of spelling and punctuation.	Deadlines fully met. Satisfactory evidence of development between different stages of the project.
40%-50% (D)	Superficial analysis of topic. Few linkages between theory and empirical data. Limited conclusions.	Reasonable presentation and organisation. Writing lacks clarity. Inconsistent spelling, grammar and punctuation.	Most deadlines not met. Limited evidence of development between different stages of project.
35%-40% (E)	Little attempt to analyse topic. Very few links between the theory and empirical data. Unsatisfactory conclusions.	Poor presentation and organisation. Writing style lacking clarity. Poor spelling, punctuation and grammar.	Deadlines not fully met. Lack of evidence of development between different stages of the project.
FAIL	No attempt to analyse topic. No links between theory and empirical data. No attempt at a conclusion.	Unsatisfactory presentation. Writing muddled and unclear. Very poor spelling, punctuation and grammar.	Deadlines not met. No evidence of development between different stages of the project.

5. Liverpool John Moores University

	Distinction (80+)	*Distinction (70 - 79)*	*Pass (60-69)*	*Pass (50-59)*	*Pass (40-49)*	*Below Pass (30 -39)*	*Below Pass (20-29)*
Use of literature	Extensive reading of literature and research used to critically analyse key concepts and practice, including synthesis of new understanding with evidence of original thought and perceptive observations.	Extensive reading to increase and challenge awareness. Evidence of critical engagement with key issues and related practice	Wide range of appropriate reading used to critically analyse key issues	Good range of appropriate texts used to discuss and identify the key issues.	Appropriate range of literature and relevant research used. Identifies issues relevant to the topic.	Evidence of some reading that is referenced but weak selection, uncritical and with an over-emphasis on descriptive writing.	Very superficial reading that does not inform discussion.
Application of principles to practice	Evidence of change resulting from extensive reflection on theory and practice exemplified by highly relevant workplace examples.	Evidence of changes in practice as a consequence of reflection on action demonstrated though workplace example.	Evidence of reflection on practice, which identifies opportunities for development.	Evidence of clear links made between theory and practice.	Some evidence of reflection upon the relationship between theory and practice.	Tendency to describe existing practice without evidence of reflection or links between theory and practice.	No evidence of reflection. Narrative unsubstantiated and from a single perspective.
Analysis, evaluation & argumentation	Very strong evidence of high level critical thinking, a good grasp of the broader issues and some originality in the broad framework used.	Clear evidence of ability to consistently critically question concepts and theories and their implications for practice.	Clear evidence of the development of argument and analysis with clear linking to literature and practice.	Logical lines of argument followed and debate concluded through linking literature to practice.	A degree of debate with some connections between the literature and the work-based experience.	Poor development of arguments and linkage to literature not articulated.	No evidence of analysis or evaluation.
Overall Presentation and Academic Conventions	Superior response to set task that could easily be developed to a publishable standard. All scholarly conventions, including secondary references applied accurately and consistently throughout	Scholarly convention applied accurately, with no omissions	Clearly structured, and well organised. Writing is clear and appropriate. Referencing accurate and appropriate, with few omissions.	Presentation is structured. Writing is clear, with few, if any errors. Referencing largely accurate and appropriate.	Presentation is acceptable, with few significant errors. Acceptable use of scholarly convention applied with some inconsistencies.	Restricted organisation and weak language structure. Significant errors and inaccuracies in referencing throughout.	Poor use of language. No evidence of structure. No attempt to use scholarly convention.

Overall score .....%

Liverpool John Moores University

Assignment Feedback: MA Advanced Educational Practice Programme

Module Code:	**Module Title**	**Date:**
Student Name:	**Tutor:**	**Mark:**
General Comments & Areas for Development.		

Appendix 3. Sample MCQ Exam – Used for formative assessment for a research methods unit at the University of Bedfordshire

		A	✓	B	✓	C	✓	D	✓
	Planning Research								
1	Complete this sentence. A hypothesis is:	the methodical evaluation of research evidence.		a statement which serves as the basis for further investigation.		a statement of the aims of an investigation.		all of these.	
2	What purpose do clearly stated aims serve?	Aims state how the research will be done and what conclusions are expected.		Aims detail how research will be done and justify why research is being carried out.		Aims state what the research intends to contribute and details how the research will be done.		Aims state clearly what the research intends to contribute and justifies the research being carried out.	
3	Deciding what data is best for your research depends upon:	The research question.		The researcher's personal preferences		The nature of the participants.		All of these	
4	Which of the following should you think about when preparing your research?	Your sample frame and sampling strategy.		The ethical issues that might arise.		Negotiating access to the setting.		All of the above	
	The Literature Review								
5	Why do you need to review the existing literature?	You enjoy reading the academic research on your topic.		Because without it, you could never reach the required word-count.		To find out what is already known about your area of interest.		To make sure you have a long list of references.	
6	To read the literature critically means:	to suggest the previous research was always poorly conducted.		skimming through the material because most of it is just padding.		evaluating what you read in terms of your own research questions.		being negative about something before you read it.	
7	Why is it important to read original articles when you are reviewing the literature?	To obtain an overview of methods and procedures.		to examine the validity of the conclusions		to look for flaws in the method.		All of these	
	Paradigms								
8	Positivism mainly involves the collection of	Quantitative data		Qualitative data					
9	Interpretivism mainly involves the collection of	Quantitative data		Qualitative data					
10	What is positivism?	Positivism holds that knowledge is grounded in religion.		Positivism is a philosophical position on how we go about obtaining knowledge		Positivism refers to statistics and statistical analysis.		Positivism refers to knowledge about the nature of our being in the world as revealed	

								through theoretical philosophizing.	
11	Which research paradigm is based on the pragmatic view of reality?	quantitative research		qualitative research		mixed research		None of the above	
12	Which of the following does not apply to qualitative research?	Data are often words and pictures		Uses the inductive scientific method		Ends with a statistical report		Involves direct and personal contact with participants	
13	Which of the following is a philosophical assumption of Interpretivist researchers?	Facts and values are distinct from one another		The proper design of research investigations will lead to accurate conclusions about the nature of the world.		Values are an integral part of the research process.		Facts stand independent of the knower and can be known in an undistorted way.	
14	Qualitative research methods can be thought of as:	a preliminary stage in the research which can contribute to the development of adequate quantification.		a stark alternative to quantitative research		parallel with the physical sciences.		methods used to search for the nature of reality.	
	Ethics								
15	What is the purpose of informed consent?	To make sure that participants know exactly what to expect from the research and to communicate their right to withdraw at any stage.		In order that the participant can make an informed choice about their participation and not undertake to do something which they may otherwise have declined to do		To ensure that participants are not lied to about the time commitment involved in their participation		All of these	
16	Which of the following need(s) to be obtained when doing research with children?	Informed consent from the parent or guardian		Assent from the child if he or she is capable		Informed consent from the child		Both a and b	
17	What is an ethical dilemma?	An ethical dilemma is conflict between the different principles of immoral conduct		An ethical dilemma is agreement of the different principles of moral conduct.		An ethical dilemma is agreement of the different principles of immoral conduct.		An ethical dilemma is conflict between different principles of moral conduct.	
18	What should happen if a participant	If you have already analysed the		All information contributed by that participant		Contact the participant for a follow up		All of these	

	withdraws from your research?	data, keep the participant's information in the study.		up to that date should be destroyed, or turned over to the participant for their disposal.		interview to see why they want to withdraw from the study.			
	Research Instruments								
19	What is the key defining characteristic of experimental research?	extraneous variables are never present		a positive correlation usually exists		a negative correlation usually exists		manipulation of the independent variable	
20	Closed ended questions are those that:	have a fixed range of possible answers.		prevent respondents from allocating themselves to a category.		encourage detailed, elaborate responses.		make the respondent provide a guarded answer.	
21	An advantage of self-completion questionnaires over structured interviews is that:	they are quicker and cheaper to administer.		they create interviewer effects.		they have greater measurement validity.		they are less prone to inter-coder variation.	
22	Which of the following is a disadvantage of using closed questions in a survey?	It makes answers easier for the researcher to process and analyse.		It minimises the risk of variability in the way answers are recorded.		They prevent respondents from giving spontaneous, unexpected answers.		Closed questions are quicker and easier for respondents to complete.	
23	Leading questions should be avoided as:	they suggest a certain answer and so may bias the results.		they create a mismatch between the question and its possible answers.		they involve negative terms and unnecessary jargon.		they ask about several different things at the same time.	
24	Piloting a questionnaire is a worthwhile exercise because it will	test out your questions on some of the people who will be in the final sample.		identify and amend any problems in the question wording, order and format.		find out what a trained pilot would think of the subject matter.		all of the above.	
25	What is an observation schedule?	A set of explicit rules for assigning behaviour to categories.		A timetable of days on which you plan to carry out your observation.		A list of questions to ask your interviewees.		A way of testing for measurement validity.	
26	Why is it particularly difficult to get an accurate record and transcript of a focus group session?	Because you cannot use a tape recorder in a focus group.		Because focus groups are transcribed several years after they are conducted.		Because the researcher often forgets to take notes.		Because there are many different voices to listen to at once.	
27	What is the role of the moderator in a focus group?	To stimulate discussion and keep the conversation on track.		To ask leading questions and dominate the discussion.		To sit away from the group and observe their behaviour.		To evaluate the group's performance on a particular task.	
	Sampling								
28	Randomised assignment is	applied to participant groups to keep		sometimes done to data to allow cause		applied to participant groups to		applied to data to control for a confounding	

		similar participants grouped together.		and effect to be analysed.		control for a confounding variable.		variable.	
29	The difference between a convenience sample and a representative sample is:	the convenience sampling selects participants randomly and a representative sample does not.		the availability - a convenience sample is easier for the researcher to approach.		a convenience sample limits the participants to the population of interest.		the size - a representative sample is bigger.	
30	Random assignment involves the:	the researcher selecting a typical population or group of people.		using a sample of people that the researcher does not know about.		use of a random procedure so that each possible outcome has an equal chance of being selected.		haphazard choice of assigning participants to a study.	
31	Response rate refers to:	the proportion of people who take part in a study		how big a population is.		how confident you want to be about your results.		how variable participants' responses are.	
	Data Analysis								
32	_ describes the degree and direction of the relationship between two variables	correlation		mean		probability		t-test	
33	What does it mean when research quotes that their findings are "statistically significant" and the statistical level set was at 0.05?	The extent to which the difference found is simply by chance.		That a difference found is likely to occur by chance 5 or fewer times out of a 100 which suggests that the difference is due to chance and so does not represent a real difference between the groups or conditions.		That 95% of the time the study will be wrong		That a difference found is likely to occur by chance 5 or fewer times out of a 100 and suggests that the difference is quite unusual and unlikely to be due to chance but rather a real difference between the groups or conditions.	
34	Complete the following sentence. All else being equal, it is more likely results will be statistically significant if:	you have a larger sample.		you have a representative sample.		you use random sampling.		All of these	
35	The independent variable refers to:	a variable which serves as the aim of an experiment.		the variable being manipulated or varied in some way by the		the variable which is only used in the control condition.		the variable which shows us the effect of the manipulation.	

				researcher.					
36	Thematic Analysis is:	relatively accessible to novices because its theoretical foundations are not great.		always the best choice for analysing text.		not a method used by social researchers at all.		a useful method of quantification.	
37	A common error when reporting Thematic Analysis is:	to mislabel the themes.		to provide so much detail about the analysis that it confuses the reader		to identify too many themes.		to give far too little detail about how it was carried out.	
38	Themes are developed by:	linking codings together and labeling the theme.		several researchers combining their analytic effort.		seeing which words occur most often.		combining a minimum of five sub-themes.	
39	What does the term 'outlier' mean?	A score that is left out of the analysis because of missing data		The arithmetic mean		A type of variable that cannot be quantified		An extreme value at either end of a distribution	
40	A test of statistical significance indicates how confident the researcher is about:	understanding the data set		passing a test about their significant other.		the inter-coder reliability of their structured interview schedule.		generalising their findings from the sample to the population.	

Appendix 4. Lesson Observation Form Used when observing teacher trainees at the University of Bedfordshire

LESSON OBSERVATION AND REVIEW FORM 2016-17 (all programmes)

This form should be used for all observations of trainees in school

TRAINEE NAME:		**DATE:**		
SCHOOL:		**JOINT OBSERVATION?** *Please indicate*	Yes	No
OBSERVER NAME/S:		**OBSERVER ROLE/S:**		
CLASS:		**SUBJECT:**		
NUMBER OF PUPILS:		**NUMBER OF ADULTS:**		

FOCUS FOR OBSERVATION *A maximum of three areas. Trainees should complete this **in preparation** for all observations. Trainees must finalise with the observer before the observation.*
Focus 1:
Focus 2:
Focus 3:

FEEDBACK ON THE FOCUS FOR OBSERVATION *You must refer to the Teachers' Standards Descriptors to inform your feedback.*
Focus 1:
Focus 2:
Focus 3:

FEEDBACK ON WHAT TRAINEE DID TO IMPACT ON CHILDREN'S/ PUPILS' LEARNING AND DEVELOPMENT

FURTHER FEEDBACK *You should refer to areas of success and points for further consideration and development such as: subject knowledge development; current national priorities; resourcing and planning for learning; behaviour management; teaching strategies; and child/pupil formative and summative assessment.*

TRAINEE INITIAL REFLECTIONS

TARGETS FOR DEVELOPMENT

There should be a maximum of three SMART targets set.
A minimum of one target will focus on the further development of children/pupil's learning.
Targets must be linked to the Teachers' Standards Descriptors.

Target	**Action** **(including timeline and person responsible)**	**Teachers' Standard**

Please insert your initials to confirm that this document has been shared and fully discussed with the trainee.	

Appendix 5. Sample Overview of Sections and Materials that Teacher trainees are expected to maintain within their Professional Develop File Portfolio

University of Bedfordshire

Contents - Professional Development File (PDF)

Section 1 - Teacher's Standards Descriptors
▪ The Teachers' Standards Descriptors should be used as a working document throughout each placement ▪ Mentors should highlight the areas met by the trainee

Section 2 – Checklists
▪ The Trainee Induction Checklist ▪ The Early Placement Professional Checklist

Section 3 - Mentor Meeting Records
▪ Records of mentor meetings using the templates provided ▪ **PE only:** Weekly self-evaluations of achievement of targets and looking forward to the following week (focus explicitly on the Standards)

Section 4 - Observations of the Trainee
▪ Any observation forms where the trainee has been observed teaching: PRIMARY – at least two observations per week: one core subject and one foundation subject. SECONDARY - at least once per day (or the equivalent number per week).

Section 5 - Visiting Tutor Forms
▪ Copies of the forms completed during tutor visits

Section 6 - Wider Professional Development
▪ Notes of things the trainee has done in and out of lesson time such as staff meetings, displays, meetings with subject coordinators, participating in a staff INSET day, after school or lunch time clubs ▪ Observations of others. Trainees are encouraged to observe the practice of a range of experienced teachers in order to analyse and reflect upon the different teaching styles and approaches used. At the start of each placement they will be expected to engage in a short period of observation in order to familiarise themselves with teaching styles, class dynamics and the climate for learning. Trainees will agree with mentors an appropriate focus for various observations. They should observe the responses and actions of the pupils as well as the teachers. Observation of lessons should not just be confined to the first few weeks; it is a key tool to be used throughout their career and should be seen as a key learning opportunity.

Section 7 – PRPs
▪ Copies of each Profile Review Point

Section 8 - Primary Subject Knowledge Tracking Document
▪ Trainees should use the Tracking Document to record the progress of subject knowledge, planning and teaching across placements.

Section 9 - Daily Feedback Notes
▪ Primary trainees – it is compulsory for all primary trainees to complete these forms. Note down the daily feedback you are given, whether that is as a discussion after an informal observation or over a cup of tea at break time. ▪ Secondary trainees – it is not compulsory for secondary trainees to complete the daily feedback notes, but it may be useful to use the proforma to note down any informal feedback.

Section 10 – Notes
▪ Use the final section for any notes or comments.